Modern packaging

Nominated for *Packaging's Hall of Fame*®. Story on Page 116

September 1952

this New Speed FOR PACKAGING

HOT MELTS are sensational new Resyn adhesives. They're tremendously fast. And moisture resistant. In bookbinding, a National HOT MELT covers 16,800 copies of Reader's Digest an hour — *with a single adhesive application!* HOT MELTS are used up to 350°F. Set instantaneously. Permit immediate trimming, packing and shipping.

HOT MELTS for packaging? Gluing impervious surfaces . . . heat-seal coatings . . . grease-proof coatings . . . prestenciled adhesive spots? Potential uses for moisture-resistant HOT MELTS are practically unlimited.

National's HOT MELTS are based on vinyl acetate polymers and copolymers, and on other synthetic resins. Molecular weight of the polymer in a HOT MELT can be varied over a wide range.

If you are interested in the tremendous speed of National's moisture-resistant HOT MELTS, fill in and mail the attached coupon.

RESYNS® National ADHESIVES

National Adhesives, 270 Madison Ave., New York 16, N. Y. MP

YES! We're interested in the tremendous speed of National's HOT MELTS for _____ (application).

Name _____ Title _____

Company _____

Address _____

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BRIGG'S NEW KLEAN SPOT KITS

...GO TO MARKET IN

GAIR PLASTAFOL

COMBINATION CARTONS

This Gair Plastafol combination carton contains three packaging materials made by Gair—

- **FOILINE**—sparkling foil lined board
- **TUFBORD**—for extra strength
- **PLASTAFOL**—the rigid transparency with maximum protection
- **ONLY GAIR MAKES ALL THREE!**

For visibility, protection and sales appeal try the Plastafol combination carton. You are cordially invited to inquire how Plastafol Combination Packages can be adapted to your products.

GAIR

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FOLDING CARTONS
SHIPPING CONTAINERS

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK • TORONTO

Modern packaging

Vol. 26 No. 1 September 1952

General

Hardware 99
It's still a pop-and-son trade—but take a look at the eye-catching packaging today's merchandising demands.

Heinz steps out 106
In sweeping label redesign, some of the world's most famous trademarks are juggled, but not dropped.

Plug-lid tobacco tin 109
New top construction gives tighter force fit with easier opening and eliminates all raw edges that might cut fingers.

Orange juice in a bag 110
Florida producers's revolutionary idea for single fountain servings of frozen concentrate skyrockets Walgreen's sales.

Good Taste in plastics 114
John Wagner & Sons use modern molded canister with sift-or-pour top for seasoning that goes right on the table.

Domino Sugar 116
This month's nominee to *Packaging's Hall of Fame*, the first to take sugar out of the barrel and give it packaged brand identity, demonstrates the power of packaging to build sales where other competitive advantages are limited.

Design Histories 122
Glass tube with polyethylene closure for cigars . . . new Carnation Milk shipping case . . . printed foil overwrap for Beechnut gum . . . other new ideas.

A plant goes horizontal 125
White Laboratories finds solutions to some packaging problems typically encountered in move from multi-story to one-story plant.

New concepts of military packaging 128
Today we feed warehouses rather than firing lines, and storage factors require consideration. By S. S. Horwitz.

A brand-new Smith 133
Package design for Smith Brothers' new chlorophyll cough drops is most radical departure in firm's 105-year history.

Packaging Pageant 134
Economy half-gallon packs of milk . . . candy package designed like a television set . . . other packages of the month.

Pulling as a team 136
Thomas' famous coach-and-four provides a unifying trademark in coordination and clean-up of diverse line of baked goods.

Proud label 140
Masury's Swedish-formula enamel has Svensk label and an actual "gold" coin.

Gift-ties plus 142
The ordinarily discarded bits of foil and paperboard on ribbon packages turn into re-use Christmas-tree decorations.

Display Gallery 144
Three-dimensional displays for Capitol records . . . acrylic "ice-block" display for beer . . . other point-of-sale pieces.

Hard-to-fill answer 146
Atlantic Coast Fisheries' machine to feed and fill fish fillets solves problems for non-free-flowing product.

Technical

Progress in resin coating 151
New data on methods, with a comparison of properties of six different hot-melt plastic materials. By L. M. Burgess and L. B. Swec.

Transport trials of paper bags 156
British experiment shows correlation with drop tests on filled bags, but no correlation with paper-strength ratings. By R. J. L. Allen and F. A. Paine.

Questions and Answers 160

Departments

Equipment and materials 162

Plants and people 170

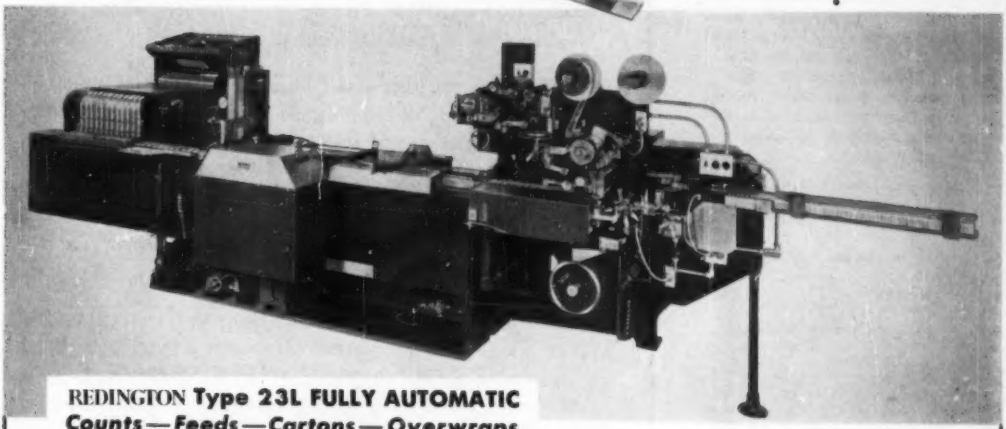
For your information 190

U. S. patents digest 194

another REDINGTON MACHINE

HIGH SPOT

in AUTOMATIC PACKAGING



REDINGTON Type 23L FULLY AUTOMATIC
Counts — Feeds — Cartons — Overwraps

Yes—REDINGTON equipment handles this *entire* packaging job for the new CLORETS, produced by American Chicle Company, Long Island City, N. Y. Here is the efficient, fast, continuous operation:

The machine automatically feeds Clorets from a hopper, assembling them in groups of 12 (2 rows of 6) in pockets of an intake conveyor. After individual cartons are automatically fed from their magazine and formed, this 12-piece product assembly is inserted and the carton closed by tucking in the end-flaps. A special device spot glues the half of the split flap not under thumb cut-out. The package is then fed to the cellophane wrapper (which operates as a unit with the machine), where it is wrapped complete with tear tape. A red spot is printed on protruding end of tape by a special device mounted on the machine.

Whether your packaging requirement is complex or simple, REDINGTON experience and design skill can help you to consistently *better* packaging under all kinds of conditions—and REDINGTON's unsurpassed construction standards mean less maintenance, less down-time, longer productive life.

Call us in to discuss cost-cutting improvement possibilities for *your* packaging operation. There is no obligation.

IMPROVE YOUR PACKAGING— AND CUT YOUR COSTS—THE **REDINGTON WAY**

SEND FOR THIS COMPLETE CATALOG

32 illustrated pages of information about the many REDINGTON standard and special machines for AUTOMATIC PACKAGING of everything from Codfish to Razor Blades. Write to the address below . . or to our Eastern office—342 Madison Ave., New York 17.

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Modern packaging

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BRANCH OFFICES. *Chicago*, 101 E. Ontario St., Chicago 11, Ill. (DElaware 7-0060). *Cleveland*, 815 Superior Ave., Cleveland 14, Ohio (SUperior 1-0737). *Los Angeles*, 816 W. Fifth St., Los Angeles 17, Calif. (MUtual 8335). *London, England*, L. H. Dolaro, European Advertising Representative; 10, 11 and 12 Broad Street Ave., Blomfield St., London, E. C. 2, England (London Wall 4231).

Modern Packaging published monthly by Modern Packaging Corp., at Emmett St., Bristol, Conn. Subscription $6 for one year, $11 for two years, $15 for three years in United States and Canada; foreign, $8 one year, $13 two years, $17 three years. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange by money order or by draft on a New York bank. Price this issue, 75 cents per copy (foreign, $1). Copyright 1952 by the Modern Packaging Corp. All rights reserved including the right to reproduce this book or portion thereof in any form. Printed in U.S.A. Acceptance under Sec. 34.64 P. L. & R. at Bristol, Conn. Authorized Dec. 21, 1950.

MODERN PACKAGING is regularly indexed in the *Industrial Arts Index*.

EDITORIAL

Three little letters

AT THE BOTTOM OF THIS PAGE there appears a little six-sided emblem with the letters "ABC." Most readers know that this signifies membership of MODERN PACKAGING in the Audit Bureau of Circulations and that it means something to advertisers. But we often wonder whether they realize what it means to readers.

There are two theories of business-paper publishing. One holds that the publication should select its readers; the other, that the reader should select the publication.

The weakness of the first theory is that the magazine must be distributed free of charge, like a handbill; nobody knows how much the recipient values it or whether he reads it at all.

The strength of the second theory—which is the ABC principle—is that the reader's interest is proved; in ordering and paying for the magazine he demonstrates in the most conclusive way that he wants it and every time he renews his subscription he bears testimony that he reads it and finds it of value.

But there is more to it than this. The free-distribution magazine obviously has no real obligation to its readers, which it can lop off or add on at will from any handy mailing list; it is answerable only to its advertisers. The ABC-paid magazine has a contract to fulfill with its readers as well as with its advertisers; it must earn its subscription fees through careful evaluation and honest presentation of its editorial material in the reader's interest, regardless of advertising considerations. It is the ABC theory that this policy best serves both the reader and the advertiser, and the ABC itself stands ever vigilant over circulation lists, ready to cut off in an instant any publication that engages in questionable distribution practices.

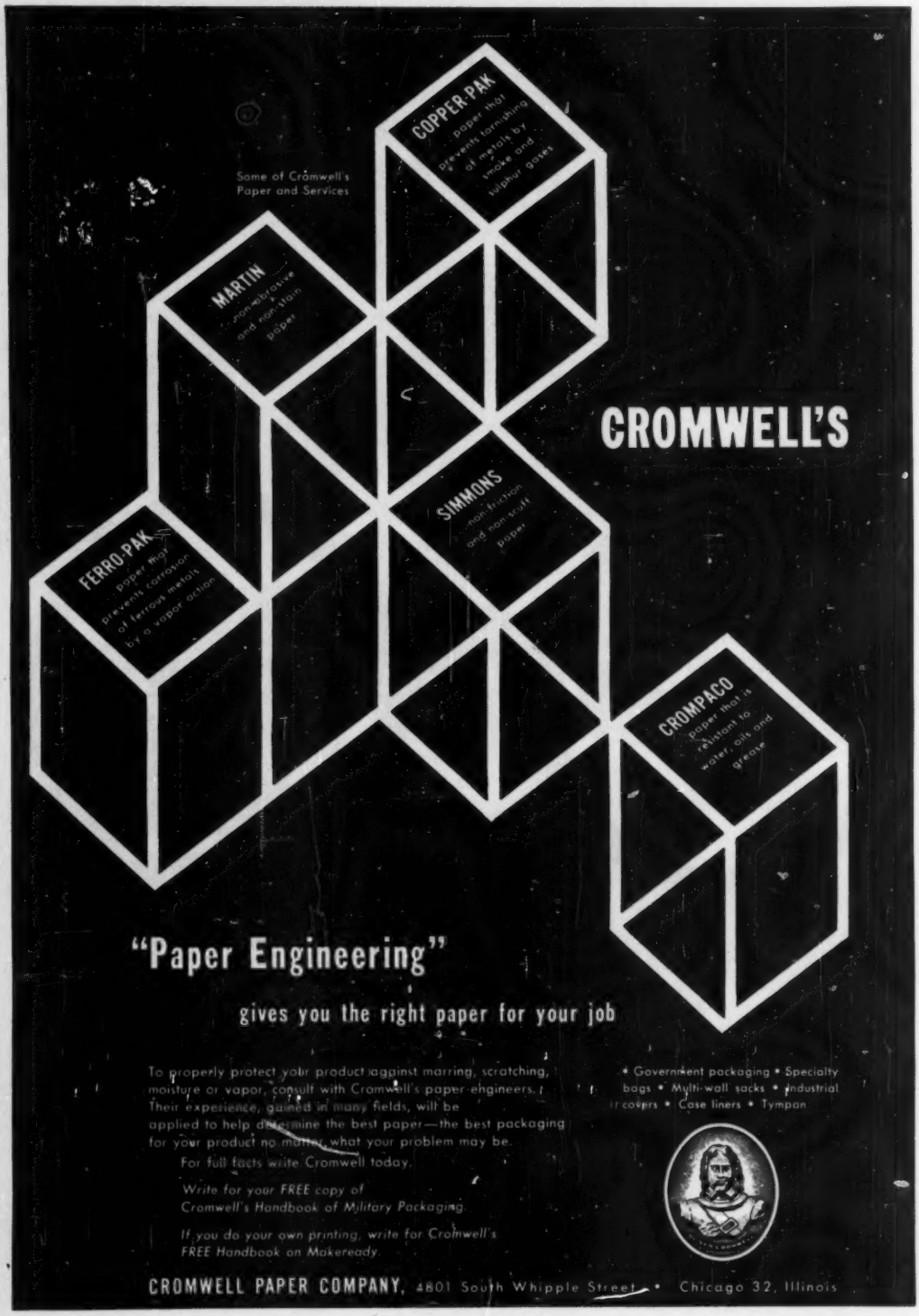
MODERN PACKAGING is proud that it has flown the ABC banner for 16 years and is today one of 370 business publications who similarly show that responsibility to the reader is their guiding principle.

The Editors

Take a *good* look!

This Dobeckmun cellophane bag is perfect for self-service merchandising. No matter how it's displayed it tells its story and *sells*. Proof? Listen to D. A. MacGregor of Crown Mills: "The immediate acceptance of our package astonished us, particularly considering today's resistance against new lines of merchandise. After three months on the market our sales have increased many times and are continuing to grow." Perhaps you'd better take a good look at *your* package, then look up your Dobeckmun man today.

The Dobeckmun Company, Cleveland 1, Ohio · Berkeley 2, California · Bennington, Vermont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CROMWELL'S
SIMMONS
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CROMPACO
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Another development using

B. F. Goodrich Chemical Company *raw materials*

Inside story of a better drum

B. F. Goodrich Chemical Co. does not make these drums. We supply raw materials for the coating only.

Geon latex coating protects fiber wall against grease, chemicals, moisture!

MANUFACTURERS who have problems of protecting walls of fiber drums against chemicals or greasy contents find this container the perfect answer!

Its interior is coated with Geon polyvinyl chloride latex. When the drum is used for shipping lubricating grease, for example, the Geon coating prevents the grease from penetrating the fiber wall. When the drum is used for shipping materials such as ion-exchange resins, the Geon coating prevents loss of moisture.

The Geon coating won't chip or flake off—can be easily washed clean—never contaminates the contents. It may be applied to either the interior or exterior of fiber drums.

There's a complete family of Geon latices. They're designed for specific requirements—have many uses in the packaging field. They resist heat, cold, aging, weather, wear—oil, grease, acids, and alkalies. Colors can be brilliant or delicate.

We make no finished products—supply raw materials only. But technical help is yours for the asking. Send for the Geon Latex Chart, and ask for the new booklet, "Packaging Problems Solved With Geon". Please address Dept. GL-9, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco.

GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable.

GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON organic colors

WHAT'S HATCHIN'

IN YOUR BUSINESS

If it's Lithographed Metal Cans, We'd Like to Know

DOES your lithographed metal package measure up to the quality of your product? Does it make people want to buy it? Today's competition makes package design and color more important. Heekin Lithographed Cans are individually styled . . . styled to sell your product . . . and keep it selling. Heekin colors are true and long lasting. Heekin's metal packaging know-how . . . plus Heekin's Personal Service . . . stand ready to serve you. Call on us.

HEEKIN *Lithographed* 1901 51 *Years of Service* 1952 **CANS**

THE HEEKIN CAN CO.,
PLANTS AT CINCINNATI & NORWOOD, OHIO, CHESTNUT HILL, TENNESSEE; SPRINGDALE, ARKANSAS

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in slitting and sheeting operations too. In the new Clark-Aiken Goebel line of slitters and rewinders you find new profit in the combination of precision and speed. Precision operation to produce rolls to the most exacting specifications.

High speed operation for lowered cutting costs. You'll find this combination in all Clark-Aiken slitters, rewinders and cutter layboy units. You'll also find a model to exactly fit your needs. Write today for complete information on this cost cutting line.

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SLITTERS AND REWINDERS

THE CLARK - AIKEN COMPANY
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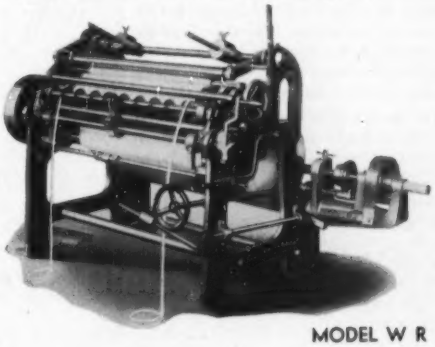

MODEL W R

"Here's just the gift for mommy"

Into America's Christmas gift lists go many happy hours of scanning catalogues, brochures and magazines.

Holiday shopping at home is a fast-growing practice because retailers and manufacturers have made it so easy and enjoyable. Colorful, appealing Christmas promotions are accounting for an ever-increasing percentage of their sales.

This is but one of the many ways in which fine printing adds to the enjoyment of living and helps build sales for products throughout the nation.

Working side by side with the printer and lithographer, Oxford Papers share in the creation of better-looking, more effective holiday gift promotions. Learn for yourself how the superb quality of Oxford Papers can improve your own year-round selling-in-print.

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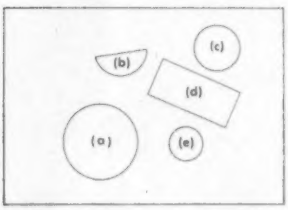
Mills at Rumford, Maine, and West Carrollton, Ohio

BATES SELLS GOOD GROOMING

in TRI-STATE *Rigid Plastic Boxes*



BATES uses our Stock Boxes

(a) – No. 175 – Diam.: 6" x 1½" deep
(b) – No. 54 – Half Round: 4⅜" x 1" deep
(c) – No. 52 – Diam.: 4¾" x ⅝" deep
(d) – No. 82 – 6⅞" x 3⅛" x 1⅝"
(e) – No. 32 – Diam.: 2¾" x ⅝" deep

For their gay and attractive manicure sets, C. J. Bates & Son, Chester, Conn., choose plastic packaging that provides dust-free protection, eliminates expensive labelling and sealing, and gives the consumer a perfect, practical bonus.

The five transparent Rigid Plastic Boxes shown here — each selected by Bates as a sales-plus for their products — offer a fine sample of the variety and versatility of our stock sizes. And Tri-State's injection molding techniques also make possible an economical and "custom made" answer to any of your packaging problems.

For greater product pride, utility, and point-of-sale appeal: consult Tri-State — catering to the packaging needs of great companies everywhere.

The best Rigid Plastic Boxes are Injection Molded by

TRI-STATE PLASTIC MOLDING CO., Inc.
HENDERSON 6, KENTUCKY

NEW YORK: 12 E. 41st St., MUrray Hill 3-6572 **CHICAGO:** 176 W. Adams St., FRanklin 2-7292 **DETROIT:** 4697 Lakewood, VAlley 2-9761

Bright sales in the WESTON sky!

Weston Biscuit Company has always had a fine sales record... nation-wide. From its four big plants in Passaic, N. J., Battle Creek, Mich., Burbank, Cal., and Waco, Texas, Weston could ship fresh goods anywhere

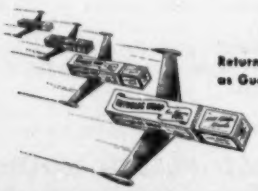
But if that picture was reasonably bright... look what happened when Weston went to Reynolds Aluminum Foil Packaging! What shopper could resist that quality gleam on the market shelf? And once she tried the bakery-fresh crispness of these foil-protected cookies, how could she fail to load her basket on every trip?

The technical secret is Reyseal*, Reynolds exclusive heat-sealing lamination of foil, wax and paper. But the housewife needn't know that. Eye-appeal to make her buy, taste appeal to make her re-buy... that's what she knows.

Weston now has seven items packaged in Reynolds Aluminum Foil, and more coming... all bearing that important notice: "FOIL-WRAPPED FOR FRESHNESS." *Sales are soaring.* In many territories phenomenal increases can be attributed unmistakably to the changeover to foil.

Put this sales-power behind your own packaged product. Phone, write or wire your nearest Reynolds Aluminum Sales Office or **Reynolds Metals Company,** General Sales Office, Louisville 1, Kentucky.

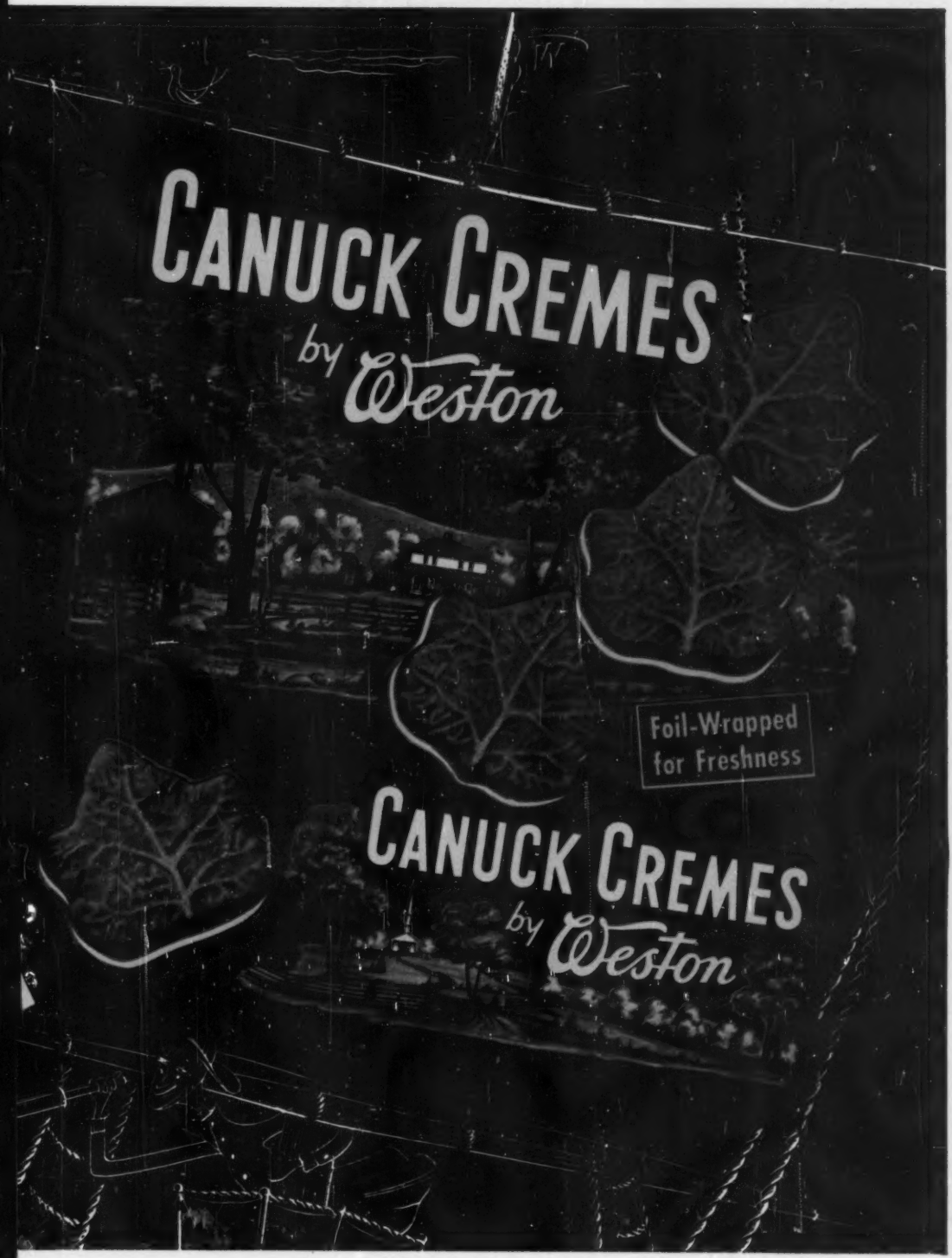
*Reg. U. S. Pat. Off.



Return Flight as Guaranteed!

REYNOLDS ALUMINUM

Pioneers of Progress in Aluminum Foil Packaging


CANUCK CREMES
by Weston
Foil-Wrapped
for Freshness
CANUCK CREMES
by Weston

If that's an H-A Glass Representative at your desk he is . .

Most likely in his early forties . .

He's had twenty or more years of experience . . .

He's been factory-trained by H-A

He knows glass and he knows packaging

If that isn't an H-A Representative at your desk . . .

HE SHOULD BE

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More **P**rotection
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the flexible
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that meets your
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ACME BACKING CORP. Brooklyn 6, New York

1 Three flavors of Home Brand Gelatine and an aluminum mold offered as a premium are placed on packaging board. Opening in board is specially cut to receive the deal.

2 A tight-sticking band of colored "Scotch" Cellophane Tape is applied firmly with a single circular sweep. Knife blade hinged in slot on board cuts the tape neatly.

Combination Deals?

THIS 3M-DESIGNED FIXTURE DOUBLED OUTPUT FOR GRIGGS, COOPER & CO.!

Ideal for small-output or testing operations, the "Scotch" Brand CD Banding Fixture gives you production-line efficiency at rock-bottom equipment costs. The CD Fixture is one of many specialized packaging aids designed and manufactured by the 3M Company.

PUT THESE TRAINED ENGINEERS to work on your packaging problem! Whether it's banding, sealing, coding, reinforcing or protecting, 3M Service Representatives know exactly which of the more than 200 "Scotch" Brand tapes will do the job best. They will also suggest the right dispensers, and aid in the design of special models. Write Dept. MP-92, 3M Co., St. Paul 6, Minn., and a representative will call promptly

Tape does it quicker, better, cheaper!

SCOTCH BRAND Pressure-Sensitive Tapes

The term "Scotch" and the plaid design are registered trademarks for the more than 200 pressure-sensitive adhesive tapes made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ont., Can.

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proud plumage for proud products

Your products strike a proud and pleasing note in zephyr weight,—smash proof ~~MILLS PLASTIC~~ bottles.

Their elegance enhances luxury products—they add prestige appeal to mass merchandise in either your custom design bottles or in standard Mills OBLONG or Mills CYLINDER bottles. And the new SPRAYKAP—with no parts to lose—affords simplest assembly and easiest dispensing.

Let your present and prospective products look and sell their best in ~~MILLS PLASTIC~~ bottles. Today's inquiry on your letterhead can help increase tomorrow's sales.

Mfd. under Patent Numbers: 2,515,093, 2,579,390 and 2,579,399
Other patents pending.
Trade Mark Reg.

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Efficient MeritSEAL caps give your products a luxurious, sparkling finish that really helps sell your cosmetics for you! Hard scratch-resistant coating comes in glistening, jewel-tone colors—handsomely lacquered or lithographed to suit your exact requirements. Exclusive, patented thread construction spins cap on easily, forms a perfect-fitting seal. Send for full information and samples today . . . no obligation. Simply state your color preference, and sizes needed for your products.

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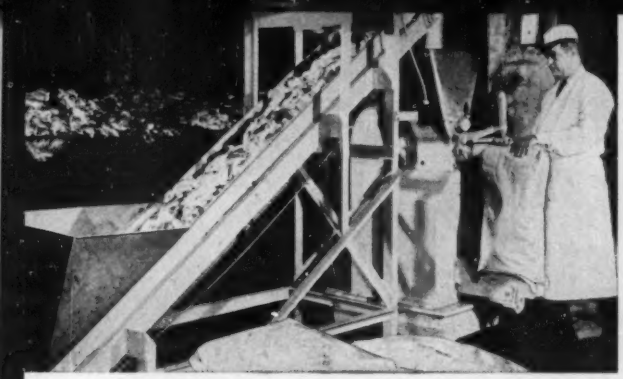


Cut Shipping Costs—To replace other types of containers for shipping meat scraps, a number of meat packers switched to valve-type multi-wall bags with an inner coating of "Alathon." The bags hold 75 pounds of meat, are filled and weighed automatically. They cost less than half the price of old containers . . . eliminate return shipping costs . . . retain the natural color and flavor of meat.

How Paper Coated with DU PONT ALATHON* cut shipping costs . . . increased production—reduced breakage

Packages made of paper coated with "Alathon" polythene resin profitably solved the tough packaging problems shown here. The outstanding properties of "Alathon" have made this possible.

Moisture resistance—Ideal for packaging materials that must be kept dry or those that must retain moisture.

Chemical inertness—Resistant to most greases, acids and alkalies at ordinary temperatures. Tasteless, odorless and nontoxic. Ideal for packaging most food and chemical products.

Flexibility at low temperatures—Even down to 70°F. below zero, "Alathon" is flexible.

Excellent heat seal—Coatings of "Alathon" heat-seal rapidly. Strong seal is maintained in most cases even when powdery contents "dust" into sealing area.

Economy—One pound of "Alathon" will cover 30,000 sq. in. of paper with a 1-mil coat, a thickness frequently used.

Superior blend for wax—"Alathon" wax blends produce far better coatings than wax alone. Coatings are stronger, scuff-resistant, stay hard and glossy in hot weather.

A wide variety of packages are made of paper coated with "Alathon": single-ply and multi-wall bags, pouch bags, chip-board containers and trays and over-wraps are a few examples. Whatever your packaging needs, we'll gladly work with you and put you in touch with sources of supply.

Increased Production—A producer of chocolate-covered ice cream products on a stick had trouble getting a good heat seal with his wrappers . . . even worse, the material became brittle at low temperatures during the packaging operation and would break, causing costly shutdowns. His new wrapper, coated on the inside with "Alathon," is quickly heat-sealed and stays flexible at wrapping temperatures. Result: production is increased about 15% . . . and he has no shutdowns due to breakage.

Reduced Breakage—Conventional packaging materials were unsatisfactory for peat moss and humus. They failed because they were destroyed by moisture and micro-organisms in the product. New multi-wall bags lined with "Alathon" solved the problem. Moisture was kept in, air was kept out, the micro-organisms did not affect it. The bag does not weaken from moisture, and what's more, drop-breakage tests show that it is far stronger than any other lined bag tested.

*REG. U. S. PAT. OFF.

DU PONT
REG. U. S. PAT. OFF.
Better Things for Better Living . . . through Chemistry
Polychemicals
DEPARTMENT
CHEMICALS • PLASTICS

SEND FOR NEW BOOKLET

Gives additional facts and details showing advantages of using paper coated with "Alathon" for many kinds of packages. Please check or show the industry in which you are interested.

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Department, 159-M Nemours Bldg.
Wilmington 98, Delaware

☐ *Food* ☐ *Dairy Products* ☐ *Baked Goods*
☐ *Chemicals* ☐ *Soap & Detergents* ☐ *Other*
☐ *Frozen Products* ☐ *Fertilizer*

Name _____ *Title* _____
Company _____
Address _____
City _____ *State* _____

CONTRACOATER*

A REVERSE ROL

COATER

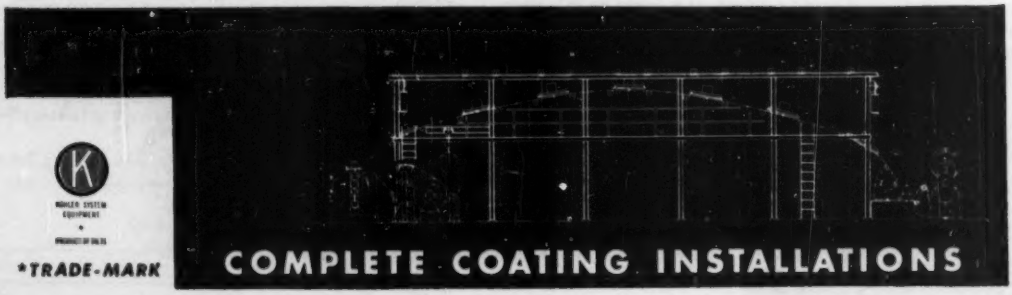
for the **organisols •**

plastisols **felt • fabric and film**

Write for Bulletin DOM No. 5

DILTS MACHINE WORKS, Fulton, New York

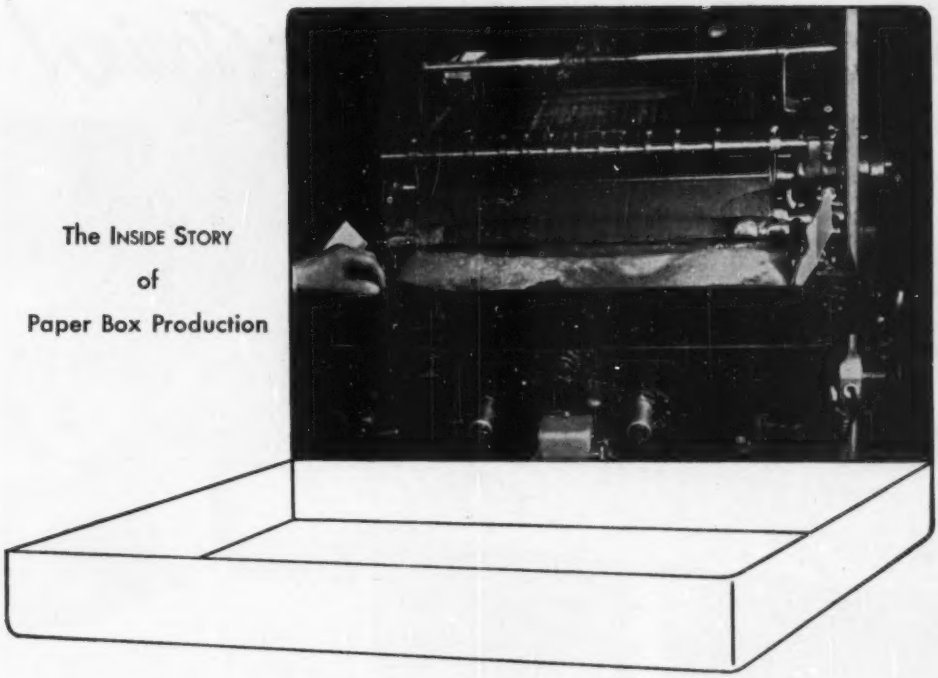
SHARTLE BROS. MACHINE CO., Middletown, Ohio • *Divisions of* THE BLACK-CLAWSON CO., Hamilton, Ohio
Northern Sales Office: 814 N. Superior St., Appleton, Wisc. • *Southern Sales Office:* 937 Coventry Road, Decatur, Georgia
Western Sales Office: Mayer Bldg., Portland, Oregon • *Associate:* THE ALEXANDER FLECK LIMITED, Ottawa, Ontario
Subsidiary: B-C INTERNATIONAL LTD., Greener House, 66/68 Haymarket, London, S. W. 1, England



*TRADE-MARK

COMPLETE COATING INSTALLATIONS

The INSIDE STORY
of
Paper Box Production



Does a box problem have you STUCK?

Sizable and complicated machines are involved in the making of Miller boxes. They include, as you see, one that puts the right kind of glue, in the right amount, on the right places at the right time.

Which leads us to wonder if a packaging problem may have you—er—stuck? More complicated than this gluing machine is the multi-sided question that must be answered before you can have the best for your purpose: the question of protection, identification, sales appeal, shipping economy, shelf-and-storage compactness, etc., *etc.* If you'd like to talk with a man who knows a lot of the answers, and is glad to share them, use the coupon opposite. No obligation, positively!

WALTER P. MILLER CO., INC.
452 York Avenue, Philadelphia 23, Pa.

We'll be glad to talk packaging with your representative, with the understanding that no obligation is involved. Better have him call up ahead of time for an appointment.

Name .....
Firm name .....
Address ..... Telephone .....
City ..... Zone ..... State .....

In the 1952 Second Annual Set-Up Paper Box Competition sponsored by the National Paper Box Manufacturers Association, Miller won more First Awards than any other manufacturer. Full information on request.

DESIGNERS AND MANUFACTURERS OF SET-UP PAPER BOXES

Telephone
MArket 7-1776

SPRA-TAINER Does It Again!

DEAD END ...for Insects

Bid a fast "By-by" to bugs . . . both the flying and crawling kinds which are not only a nuisance but a menace to health. Stop 'em *dead* with a lethal mist of BLACK FLAG, famous insecticide of the American Home Products Corp., now pressure-packed in SPRA-TAINER.

Crown was first to invent the lightweight spray can—named it SPRA-TAINER—and now more SPRA-TAINERS are used than any other propulsion can. Nothing *protects* your product like SPRA-TAINER's patented "No Side Seam—No Top Seam" construction. Nothing *sells* your product like SPRA-TAINER's exclusive "Modern Design." And only SPRA-TAINER is supplied in three companion sizes: 12 oz. Large, 6 oz. Tall, 6 oz. Squat.

Look to Crown for continued leadership through new ideas in the design and manufacture of fine cans for almost every use. YOU CAN'T BUY BETTER CANS.

OTHER AMERICAN HOME PRODUCTS
Also in SPRA-TAINER

6 oz. Black Flag (in Canada)

6 oz. Wizard Aerosol Deodorizer

One of America's Largest Can Manufacturers

CROWN CAN
Division of
CROWN CORK & SEAL COMPANY

PLANTS AT PHILADELPHIA, CHICAGO, ORLANDO • BRANCH OFFICES: NEW YORK, BALTIMORE, PITTSBURGH, ST. LOUIS

This is the "Standard" for Scholarship

The month of September sees thousands of students returning to American campuses. While all colleges may not boast of Gothic architecture, they *can* lay claim to participating in the world's highest educational standard.

This is the "Standard" for Package Printing

Banquet Brand macaroni uses a sprightly red, white and blue wrap to signal for Mrs. Housewife's attention. This Standard-printed cellophane wrap has proven equally successful as an eye-catcher in both service and self-service stores.

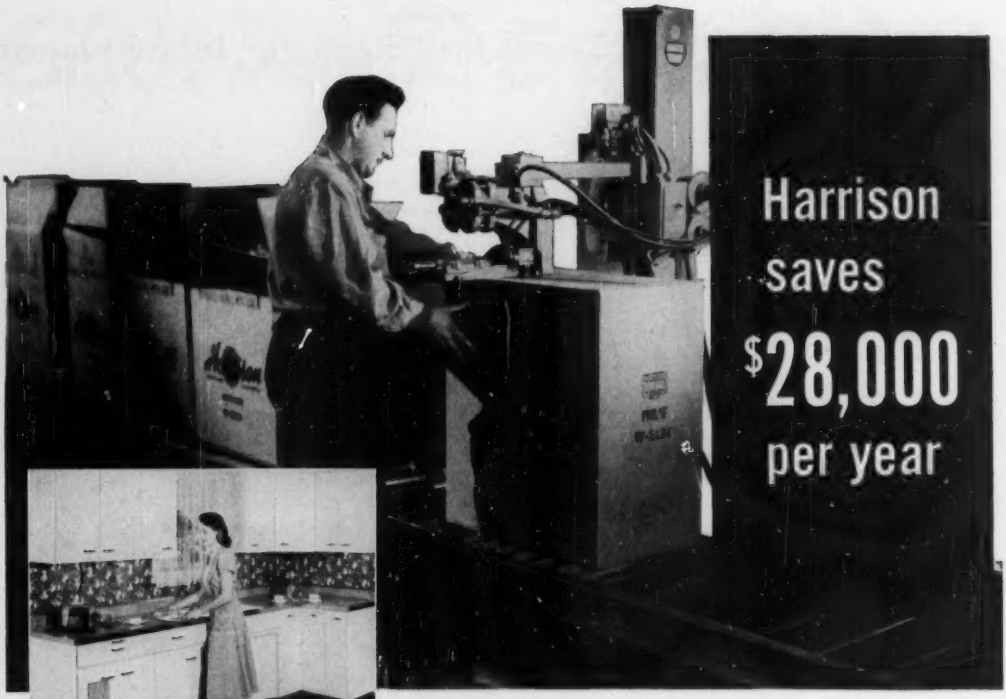
COLOR-CRAFT

Standard **printing company**

PRINTERS OF CELLOPHANE, ACETATE and GLASSINE SINCE 1936

COLUMBUS, GEORGIA

A SUBSIDIARY OF SHELLMAR PRODUCTS CORPORATION



Kitchen wall, sink and base cabinets like these are shipped in corrugated cartons closed by International Staplers.

with International Carton Stapling Machines

$28,000 saved in a year . . . $112,000 in the last four years! Unbelievable? Chester C. Cain, executive vice president of Harrison Steel Cabinet Co., Chicago, found it hard to believe, too. But read what he has to say:

"Four years ago we installed two International Retractable Anvil Stapling Machines to close corrugated shipping cartons for our line of kitchen wall cabinets, sink cabinets and base cabinets. We staple the tops and bottoms simultaneously after the cabinets are in the cartons. The machines . . . one for regular production . . . one for overflow production . . . cost $1,640 each.

"A year later, figures showed our packaging costs had gone down $28,000. Working conditions were easier for our men . . . and the equipment had paid for itself in only a month and a half.

"Formerly, we packaged about 300 units each 8-hour day, using 13 or 14 men to set up boxes, seal the bottoms, place cabinets inside, and seal the tops.

"Now with only 6 men . . . one to operate the stapler, and the rest to pack and feed, we're closing 600 cartons each 8-hour day . . . twice as many, and the closures are better."

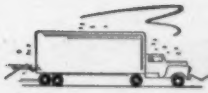
If you ship in corrugated or fibre containers, an International Retractable Anvil Stapling Machine can close them better, faster and more economically. Write for detailed information.

a seal of security

INTERNATIONAL STAPLING MACHINES

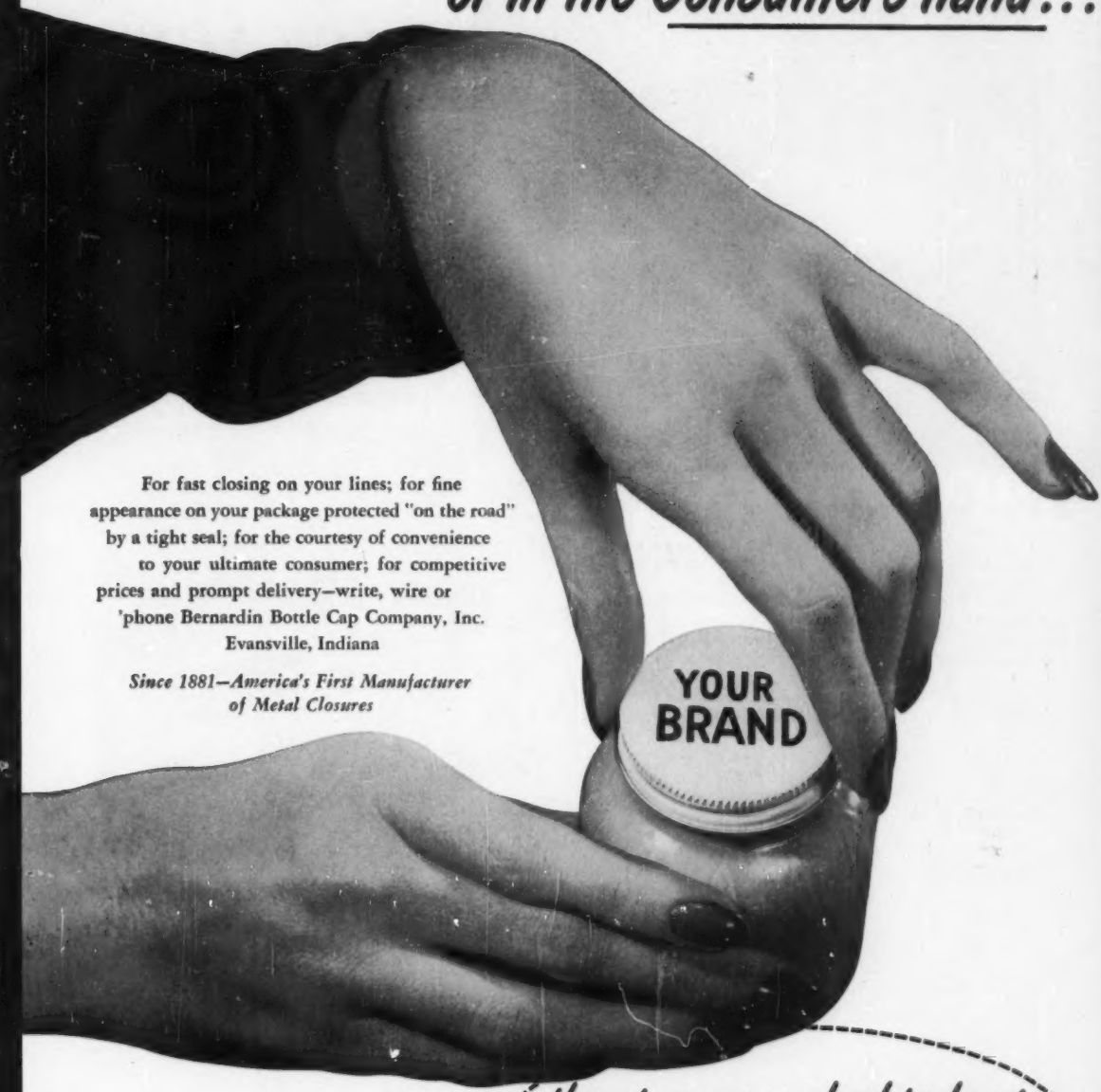
International Staple & Machine Company
806 Herrin Street, Herrin, Illinois

on the Line...



on the Road...

or in the Consumer's hand...



For fast closing on your lines; for fine appearance on your package protected "on the road" by a tight seal; for the courtesy of convenience to your ultimate consumer; for competitive prices and prompt delivery—write, wire or 'phone Bernardin Bottle Cap Company, Inc. Evansville, Indiana

Since 1881—America's First Manufacturer of Metal Closures

there's never a doubt about

BERNARDIN

METAL SCREW CAPS

RADO PACKAGES

OPEN AMAZING NEW SALES POSSIBILITIES

RADO PACKAGES* are the sort of things Sales Managers and Marketing Directors dream of but rarely find—practical, radically new, low-cost packages that ideally lend themselves to all-out consumer promotion.

RADO PACKAGES are *all plastic*. They are made automatically and continuously from a wide range of thermoplastic materials, both clear and opaque. The packages are made and filled simultaneously and can be of regular or irregular shape.

Equally suitable for liquids or pastes, RADO PACKAGES can even be produced in the form of unique capless collapsible tubes which have self-sealing apertures.

If you feel your product could benefit from this *new type of packaging* that is novel, practical, low cost and wonderfully responsive to consumer promotion, write to the Main Office of Technopol Laboratories, or to the Packaging Service Station nearest you for additional facts.

*U.S.A. Patent Nos. 2,517,027, 2,530,400
British Patent Nos. 599174, 599183
Patented in 36 other countries. Other patents pending.

TECHNOPOL LABORATORIES LIMITED

Tel: London Wall 9452-9453 • 212 St. John Street, LONDON, E. C. 1, England • Cables, Telaber, London

Factories and Packaging Service Stations:

S. AFRICA
UNIVERSAL PLASTIC PACKS (PTY.) LTD.
45/44, Menteith House, Smith Street, DURBAN.

ITALY
GISIGER & PATRIZI S. p. A.
Piazza Santa Felicita 4 Firenze

FRANCE
(Algiers, Tunis, Morocco)
S. E. P. (Soc. d'Emballages Plastiques)
Office: 87 Rue Notre-Dame-des-Champs, PARIS 6e. Telephone ODEON 71-33.
Factory: 24 Avenue de la Republic, CHATOU, France. Tel: 274.

BELGIUM
(Holland, Luxemb'g, Belgian Congo)
S. E. P. (Soc. d'Exparsion des Matieres Plastiques)
Office: 41 Rue de la Vallee, (Onderbergen), GAND. Tel: 594.96.
Factory: 68-7 Rue de l'Agrafe, Anderlecht, BRUSSELS. Tel: 22,19,32.

SWITZERLAND
GISIGER & CO.
Office: Clarldenhof. Dreikonigstrasse 21, ZURICH. Tel: (051) 27.24.47/ 25.90.36.
Factory: Obfelden.

AUSTRIA
Tupla Gesellschaft. Vienna IV., Wiedner Hauptstrasse 8 Telephone: A 34067

EIRE
TECHNOPOL PACKAGING SERVICES, 81/2 Aungier Street. DUBLIN. Tel. Dublin 58524

you get

SPARKLE plus

proven product protection

with packages of

ALCOA

ALUMINUM FOIL

Highest product standards, plus packaging that reflects quality, — this combination places Armour's Cloverbloom Butter high on the housewife's list of favorite foods.

Wrappers of Alcoa Foil help guard this well-earned reputation. From dairy to consumer — in transit, in storage, in the home — nature's true freshness and flavor are insured by a sparkling pure aluminum sheathing.

If you have a packaging problem look into the many possible applications of Alcoa Foil. You may well find it the perfect answer for better protection, greater sales appeal for *your* product.

Write to: Aluminum Company of America, 1760 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA

ALUMINUM

From the Gardner Gallery of famous American Packages

Quality

...IS NEVER A STAND-STILL WORD

Few products achieve a reputation for quality by standing still, by indulging in the luxury of self satisfaction.

As a matter of fact, quality *itself*, as every successful manufacturer knows, is a relative thing. There is only one way to keep it out in front.

That's why, here at Gardner, we believe in never being quite satisfied with a good job. We feel an obligation to ourselves—and to our customers—to do even better, tomorrow, what we have gained recognition for doing well, today.

We think that's an important reason why you'll find so many of America's most famous products packaged in Gardner cartons.

THE GARDNER BOARD AND CARTON CO.

Manufacturers of Folding Cartons and Boxboards

GENERAL OFFICES: Middletown, Ohio—PLANTS: Middletown, Ohio; Lockland (Cincinnati), Ohio
Sales Offices in Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis

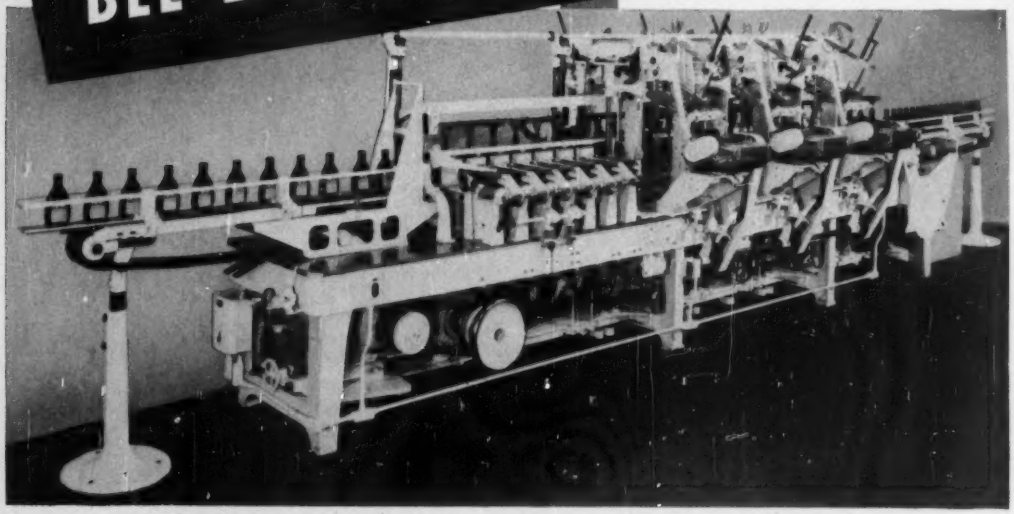
NOW

HIGH QUALITY LABELING
HIGH PRODUCTION LABELING
Combined in One Labeler

The New Model 150
WORLD
BEE-LINE LABELER

The quality and precision of label application for which the BEE-LINE is already famous, you can now get *three-at-a-time* from this new BEE-LINE with three labeling stations.

Like the single and twin station BEE-LINES, the Model 150 handles the most difficult of labeling applications smoothly, surely and steadily. If it's *production* as well as quality labeling you're after, here's the answer.



● FOR RECOMMENDATIONS, SPECIFICATIONS, ESTIMATES . . . GET IN TOUCH WITH . . .

WORLD LABELERS

"YOU GET THE BEST LABELERS IN THE WORLD"

DRY GOODS PACKAGE—VINYLITE Cast Film wrapping for sheets, pillow cases, keeps them clean, protected from handling. Transparent. Tougher than other films. Resists drying out, aging.
PRODUCE BAG—VINYLITE Cast Film bag can be heat-sealed—keeps moisture, odors in, contamination out. Lets shopper see contents. Re-usable when empty.
DRUM LINER—VINYLITE Cast Film is strong, chemical-resistant. Protects containers from contents. Makes unloading easy, speeding return of drum.
PORTION PACK—VINYLITE Cast Film transparent cover heat-sealed to plastic "souffle" cup. Keeps butter, jam portions fresh, clean, odor-free, "personalized" for restaurant patrons.
BLANKET PACKAGE—VINYLITE Cast Film keeps contents clean, clearly visible. Stitched-on zipper closing helps guard against moths. Re-usable for storage.
CHEMICAL PACKET—VINYLITE Cast Film laminated to metal foil makes attractive, heat-sealed package. Resists chemicals, water, grease. Won't dry out, crack or discolor.

Step up efficiency...Wrap up sales!

specify **VINYLITE** cast film!

Check the properties that make VINYLITE Brand Plastic Cast Film such a practical, versatile packaging material. Check its resistance to chemical attack, oil, grease, and water . . . its freedom from taste, odor, and lint . . . its vapor and gas transmission . . . its efficient heat-sealed closing.

Notice, too, that it may be transparent, printed, or laminated to foil or paper. It's soft and easily handled, yet strongly resists cracking, tearing, or discoloring. It can offer the additional advantage of consumer re-use.

Then picture *your* product wrapped in VINYLITE Cast Film . . . a better looking package—with better protection built-in. For VINYLITE Cast Film has the unbeatable combination of unique qualities that make VINYLITE Resins and Plastics so useful for scores of products in defense and basic industry.

For further information write Dept. NS-55 requesting a copy of "VINYLITE Plastic Cast Films Technical Data."

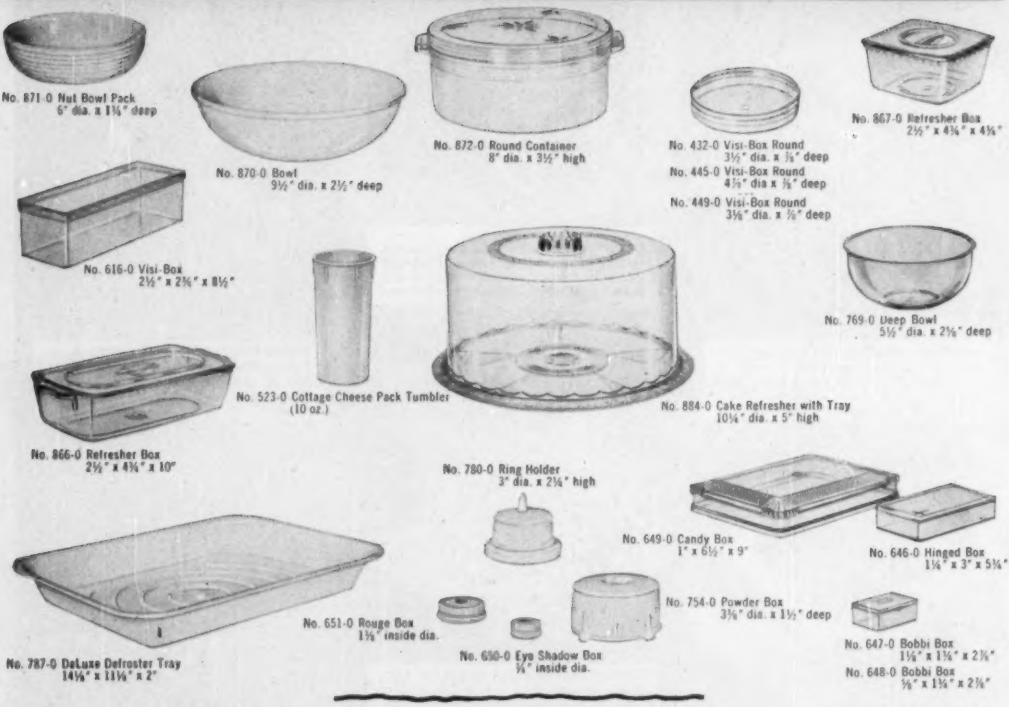
Vinylite
BRAND
PLASTICS

TRADE MARK
BAKELITE COMPANY

A Division of
Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.

FEDERAL'S VISI-BOX IS A BUSY BOX!

BUSY showing your product . . . BUSY keeping your products fresh . . . BUSY promoting greater sales for you!

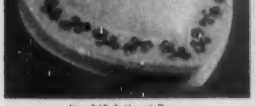

No. 871-0 Nut Bowl Pack
6" dia. x 1¼" deep
No. 870-0 Bowl
9½" dia. x 2½" deep
No. 872-0 Round Container
8" dia. x 3½" high
No. 432-0 Visi-Box Round
3½" dia. x ⅞" deep
No. 445-0 Visi-Box Round
4⅛" dia x ⅞" deep
No. 449-0 Visi-Box Round
3⅛" dia. x ⅞" deep
No. 867-0 Refresher Box
2½" x 4¼" x 4½"
No. 616-0 Visi-Box
2½" x 2¼" x 8½"
No. 523-0 Cottage Cheese Pack Tumbler
(10 oz.)
No. 884-0 Cake Refresher with Tray
10¼" dia. x 5" high
No. 769-0 Deep Bowl
5½" dia. x 2½" deep
No. 866-0 Refresher Box
2½" x 4¼" x 10"
No. 780-0 Ring Holder
3" dia. x 2¼" high
No. 649-0 Candy Box
1" x 6½" x 9"
No. 646-0 Hinged Box
1¼" x 3" x 5¼"
No. 651-0 Rouge Box
1⅞" inside dia.
No. 754-0 Powder Box
3⅛" dia. x 1½" deep
No. 650-0 Eye Shadow Box
¾" inside dia.
No. 647-0 Bobbi Box
1½" x 1⅜" x 2⅛"
No. 648-0 Bobbi Box
⅞" x 1⅜" x 2⅛"
No. 787-0 DeLuxe Defroster Tray
14⅛" x 13⅛" x 2"

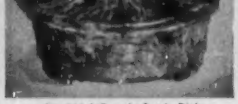
FEDERAL creates re-usable containers to fit ANY PRODUCT

Small or large boxes—transparent or opaque boxes—hinged or plain boxes—compartment boxes—intricate design boxes and containers.

There's a FEDERAL rigid STYRON plastic container for every packager of dairy products, foods, confections, cosmetics, class or bulk merchandise.

If your product requires special packaging FEDERAL will design and mold to your exact specifications.


No. 645-0 Heart Box


No. 644-0 Pagoda Candy Dish
7¼" x 1½"

No. 642-0 Lotus Box
10" x 8" x4"

No. 640-0 Buddha Box
8½" x 4¾" x 6½"

No. 641-0 Ming Three Drawer Chest
7½" x 4½" x 5½"

No. 643-0 Imperial Box
8" x 4" x 4"

FEDERAL VISI-BOX CONTAINERS
MADE OF STYRON
Guaranteed by Good Housekeeping

ATTENTION:
FEDERAL designs and manufactures Polystyrene caps for the glass packaging industry.

PHONE — WIRE — WRITE for complete catalog and for further details TODAY!

FEDERAL TOOL CORPORATION 3600 W. PRATT BLVD., CHICAGO 45, ILLINOIS

IN CANADA: THE FRENCH IVORY PRODUCTS, LTD., TORONTO

1st. Award -

BEST ARTISTIC DESIGN

1952 Set-Up Box Competition Sponsored By
National Paper Box Manufacturers Assoc.

Photo by Modern Packaging

GIFT PACKAGE for **Martex towel set (Fairfax Mills) has gold-foil base and telescope lid designed with harlequins and diamond-patterned decorative motif. Manufactured by Old Dominion Box Company.**

You can depend on Old Dominion for superior execution of your next set-up box, folding carton, corrugated container, canister, or transparent container.

OLD DOMINION *Box Company Inc.*

PLANTS LOCATED THROUGHOUT THE SOUTH

Executive Offices: LYNCHBURG, VA. • *Sales Offices:* CHARLOTTE, N. C.

THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION

Now the other Pastures are Greener!

CHLOROPHYLL lends the lure of new fields for old products. In concert with efforts to enlarge their markets through chlorophyll, leading manufacturers are helping *insure* a "green look" to product profits by selecting Ridgelo packaging. Outstanding in every regard, this custom-made, clay-coated boxboard is providing a superior presentation for sales leaders in every field of chlorophyll-content products.

For tooth pastes and powders, for mouth washes, gum and lozenges, for cream and spray body deodorants ... Ridgelo cartons are brighter, whiter, nicer to look at and to handle. *And* Ridgelo clay-coated boxboard is available in a wide variety of finishes and coatings, for efficient fabrication and printing by every type of machine and process!

MADE AT RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

Representatives

H. B. Royce, Detroit
Philip Rudolph & Sons, Inc., Philadelphia
A. E. Kellogg, St. Louis
Norman A. Buist, Los Angeles

Matador...

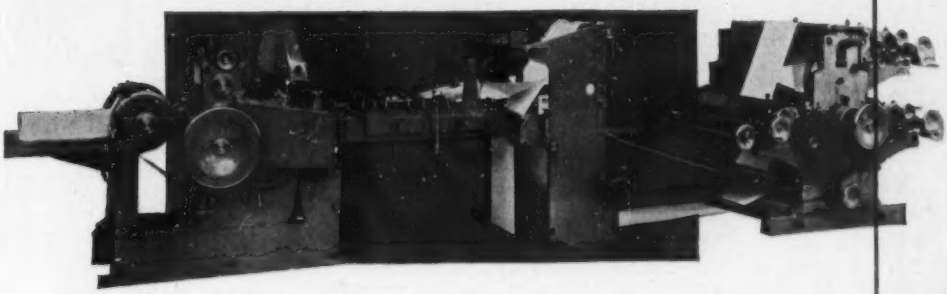
THE MOST VERSATILE BAG MACHINE ON THE MARKET!

WINDMOELLER & HOELSCHER
SINCE 1869

MEMO
FROM
H H HEINRICH

It's in the bag when you buy a Matador!

HH



- Produces bags at a rate of 1200 per minute . . . up to 400,000 per day
- Makes flat, square, envelope, shopping, shingle cut-off triple pasted
- Change bag sizes in a matter of minutes
- Handles all standard paper weights. Also—Tissue, Foil, Glassine, etc.

THREE MODELS:

#26 — 2 to 10¼" wide
4 to 18⅞" tube length

#31 — 2 to 12½" wide
4¾ to 25½" tube length

#50 — 2¾ to 19¾" wide
7½ to 30¾" tube length

OK Send me information and prices on the
H H H MATADOR
NAME:
ADDRESS:
COMPANY:
SIGNATURE

H H HEINRICH
COMPANY
111 EIGHTH AVENUE, NEW YORK 14, N. Y.
CALL US COLLECT!

Tupper Seal, air and liquid tight flexible covers fit, and are included in the sets of all Tupperware Canisters.

The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight flexible Pour All cover.

The Tupper Seal, air and liquid-tight flexible Pour All cover is used on every Tupperware 20 oz. Canister.

The Tupper Seal, air and liquid-tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.

The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.

Argentine Patent 74,095 dated Dec. 14th, 1949 on invention covered by U. S. Patent 2,487,400 November 8, 1949. Canada Patent 463,287 Feb. 28th, 1950, Union of So. Africa Pat. 8,592 Sept. 21st, 1949. Belgium Pat. 491,293 Oct. 15th, 1949. Switzerland Patent 48,970 Sept. 23rd, 1949. Italy Patent 456,937 September 19th, 1949. Other U. S. and Foreign Patents Pending.

TUPPER / Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.

FORMAL NOTICE! 9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

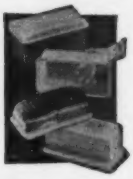
Only the Tupper Corporation, by U.S.Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

TUPPER CORPORATION

There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12½ oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

The Tupper Seal, air and liquid-tight flexible Pot Top cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.



The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.

When equipped with Tupper Seal, air and liquid-tight, flexible covers, Tupperware Cereal Bowls serve many another purpose.

The Tupper Seal, air and liquid-tight flexible cover made for Tupperware 8 oz. Tumblers also fits and is sold with all Tupperware Funnels as a base when funnels are used as storage containers.

TUPPER CORPORATION

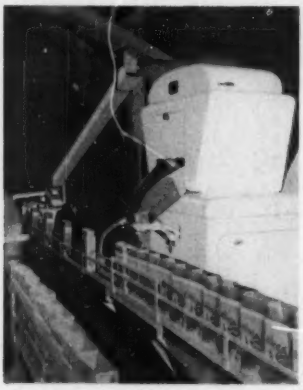
Manufacturers of — CONSUMER, INDUSTRIAL, PACKAGING AND SCIENTIFIC PRODUCTS

FACTORIES: Farnumsville, Mass., and Cuero, Texas **New York Show Rooms 225 Fifth Ave.**

ADDRESS ALL COMMUNICATIONS TO: Department MP-9

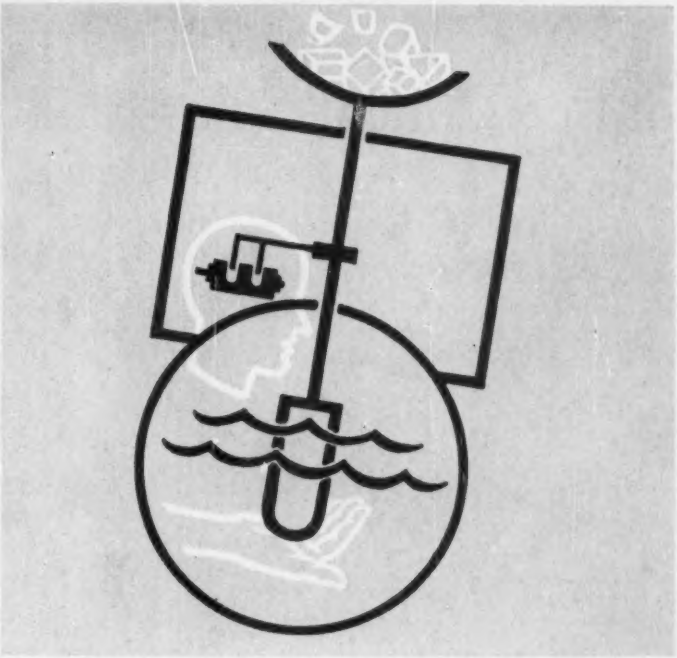
COPYRIGHT TUPPER CORPORATION 1949

Potato chips and like products weighed and filled by Hy-Tra-Lec Model H at speed of 55 bags per minute.



Crackers and wafers are weighed and filled by Hy-Tra-Lec CE system, a completely automatic operation. Users include National Biscuit Company, United Biscuit divisions, and Megowan-Educator.

Leaders in cookie and candy industries use Hy-Tra-Lec Model M for accurate, high speed weighing and filling.



THE BIG IDEA IN MODERN WEIGHING

"Positive displacement" used to weigh-fill at high speed with superior accuracy.

A new type weigher is making packaging history. It's Hy-Tra-Lec, developed and manufactured by Wright Machinery Company. Hy-Tra-Lec weighs and fills a variety of products into most every type bag or container at high speed with superior accuracy and gentleness.

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See what Hy-Tra-Lec can do for you. We'll be glad to conduct test runs, recommend the model best suited for your operation, and describe the accuracy and speed you can expect from the big idea in modern weighing.

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I want to reduce my packaging costs. Send me latest information on your Hy-Tra-Lec weighers.

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Bemis Deltaseal®

—This long-time favorite has exclusive pull-cut-pour spout. Billboards your brand . . . and flat tops and bottoms help build excellent mass displays.

Bemis Deltaphane®

—If your trade prefers a window package, Bemis Deltaphane, with the "picture window," is your best bet. Your brand in crisp, bright colors on all four sides. Has the pull-cut-pour top, too.

Bemis Cellophane

—There's an increasing demand for the *show window* bags—Bemis Cellophane. Bemis' bright, eye-catching printing makes your brand shine like a headlight.

Bemis Flexi-Carton®

—Sturdy, gusseted bag, single-, 2- or 3-ply. A fine shelf package, with your brand printed on all sides. Closures: sewing, taping, stapling, pasting.

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Bemis is also your best source for Burlap, Cotton, Multiwall, Paper and Waterproof Bags. Ask your Bemis Man for the complete story.

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OVER 5 MILLION SALES

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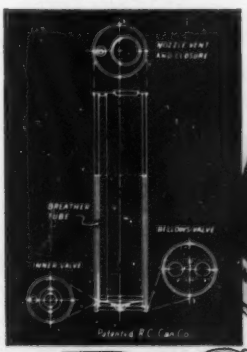
- ***Rapid, Non-Binding Bellows Action*** . . . Free-working at all times, moisture-resisting stock for all climates.



It takes a quality product PLUS a quality-engineered container, to ring up over 5 million bug-duster sales.

Many garden and insect dust packers realized this when they brought their products to R.C. engineers to be "dressed up" in an efficient package. The R.C. SPRA-CAN was the answer—a specific answer to the strong consumer resistance to past inferior, make-shift dusters.

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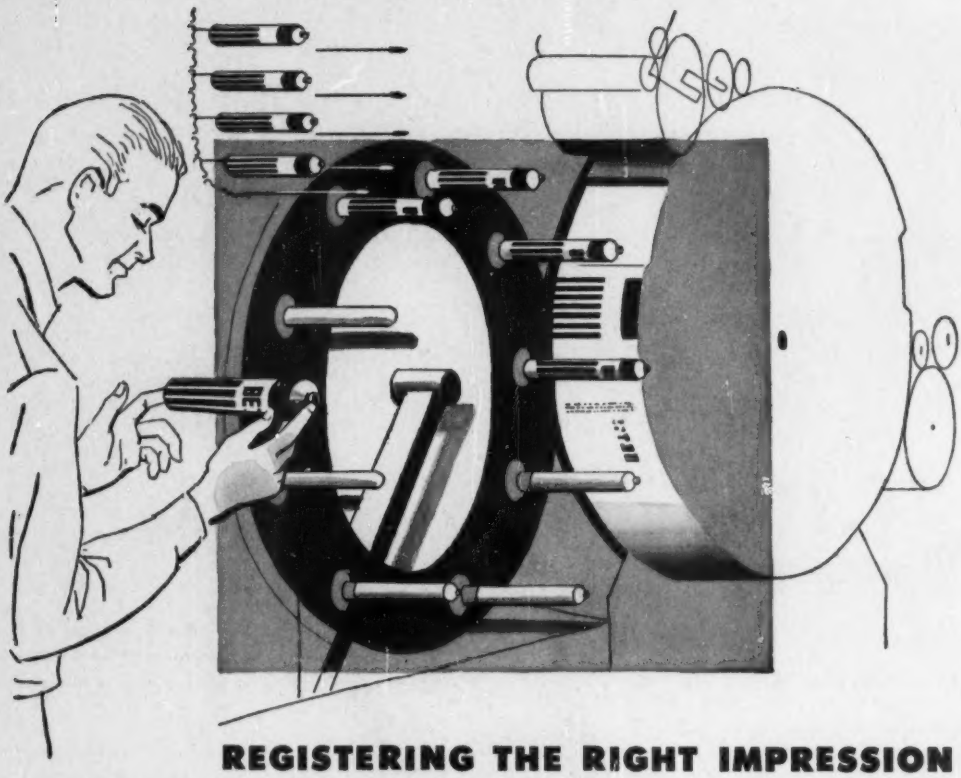

REGISTERING THE RIGHT IMPRESSION

Each time the rubber "blanket" of this Sun Tube lithographing machine whirls around, it prints not one but all colors. The colors are laid upon the blanket progressively, but are transferred to the tube in *a single operation*. The result is a tube of extraordinary brilliance.

It's easy to see that this process demands split-hairsbreadth control. The slightest errors in registration would mean blurred design, "muddy" colors, packages that dull a product's reputation.

Just compare a Sun Tube with a run-of-the-mill tube. The crisp reproduction tells you that, in lithographing as in every other step, Sun Tube holds to *precision standards* ... to give customers tubes that sparkle with sales appeal, protect the product perfectly, and fill at lowest cost.

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Houston 6, Tex. . . . . . *R. P. Anderson Co., 1426 Castle Court*
St. Paul 1, Minn. . . . . . *Alexander Seymour, 712 Pioneer Bldg.*
Dallas 2, Tex. . . . . . *R. P. Anderson Co., 1122 Texas Bank Bldg.*
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Sun Tube Corporation

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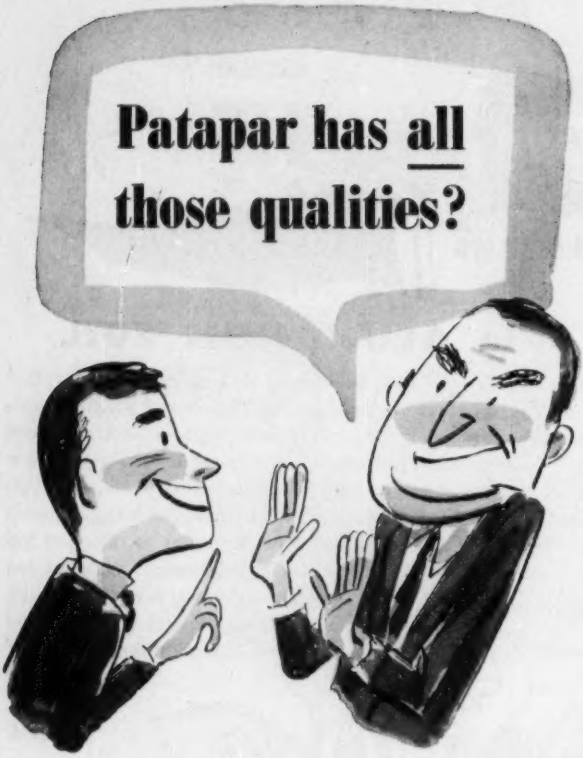

Unless you test it yourself, you might think it impossible that Patapar Vegetable Parchment could have so many unique qualities—high wet-strength, grease-resistance, boil-proofness, tasteless, no lint or fuzzy fibres, and beautiful texture for printing.

Patapar protective wrappers

Plain or beautifully printed in one or more colors, Patapar is perfect for packaging and protecting butter, bacon, poultry, celery, lard, ice cream, margarine, putty, machine parts and many, many other products.

For samples, tell us the use you have in mind so that we can send you the correct type of Patapar *(there are 179 different types).*

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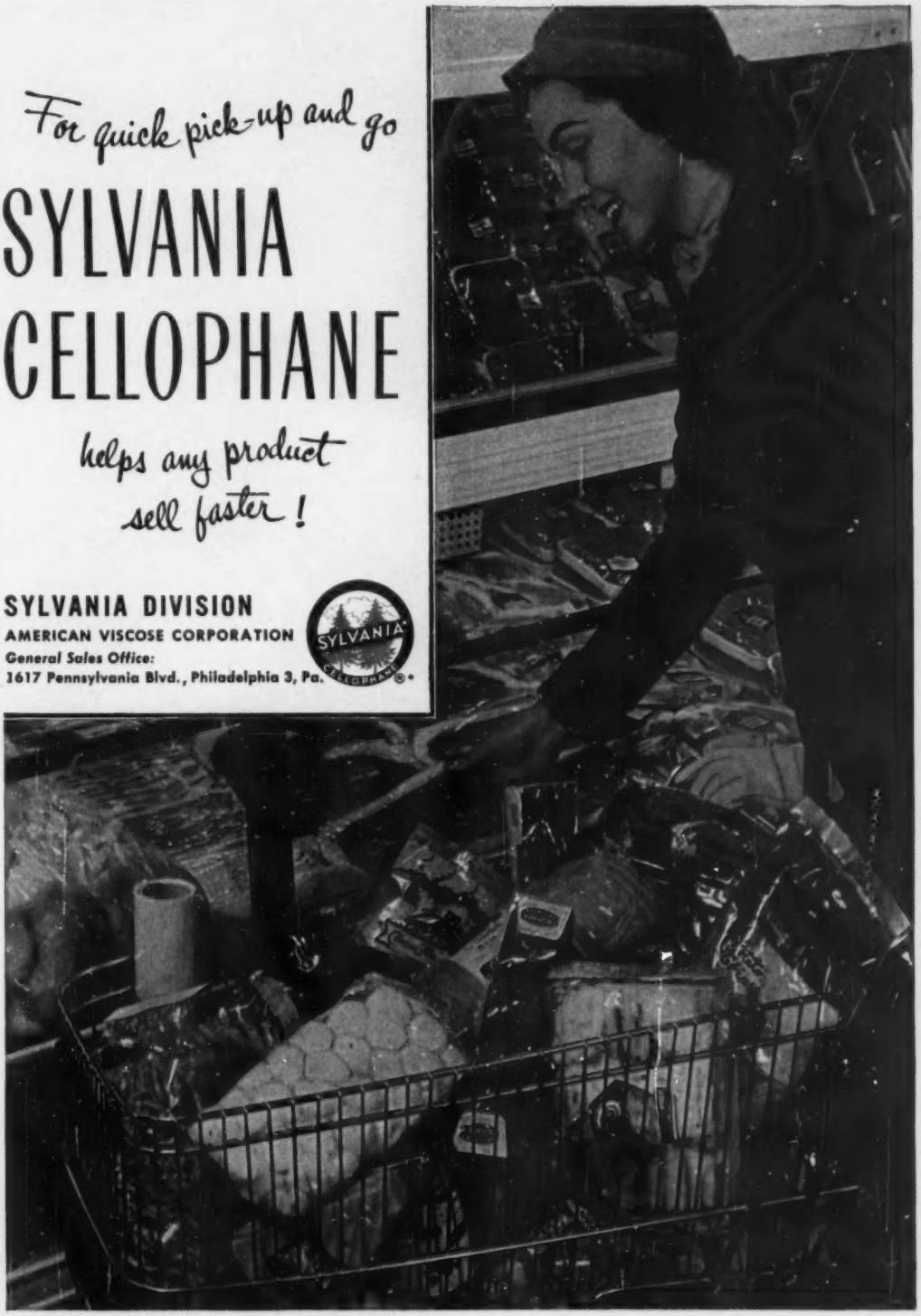

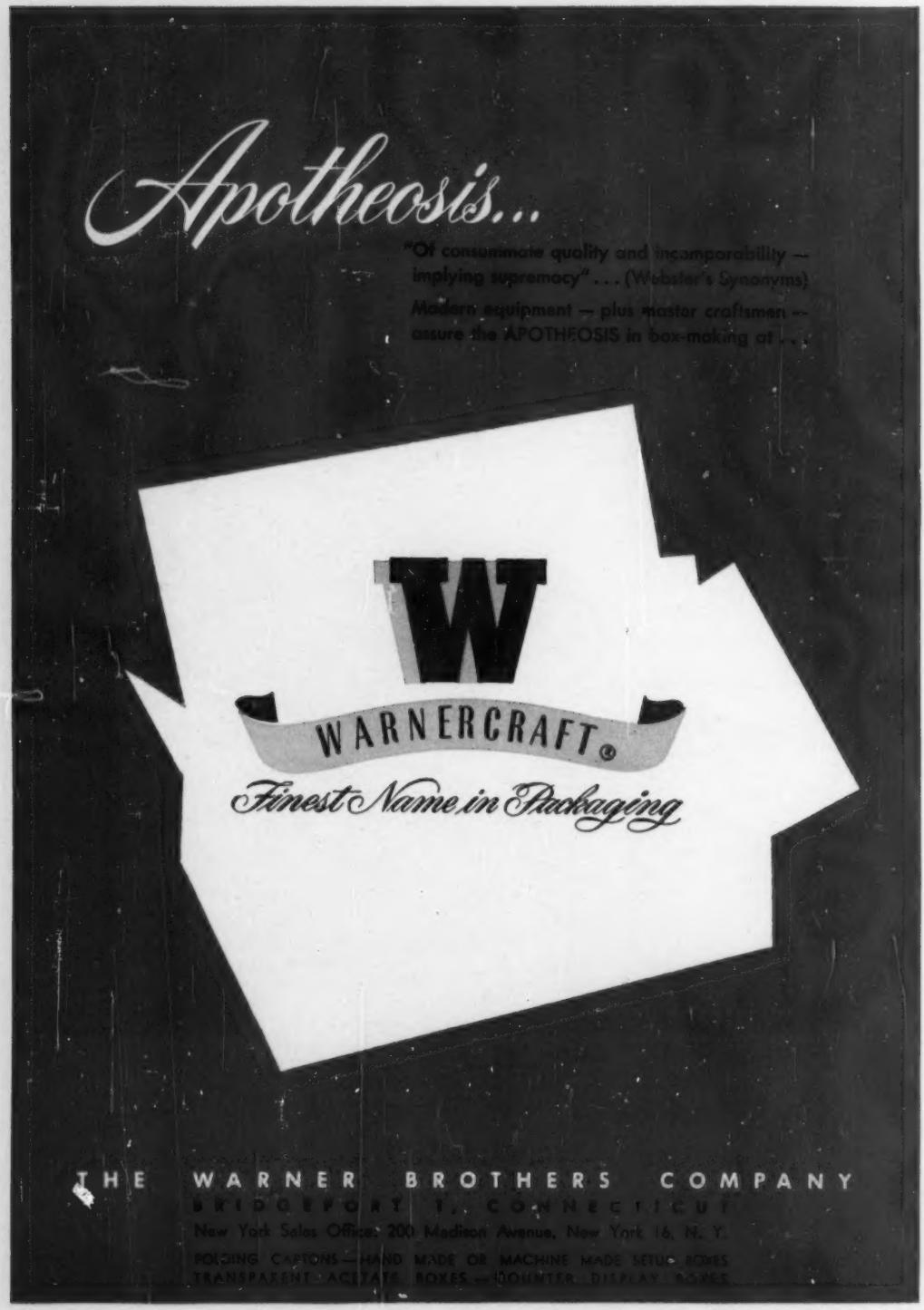
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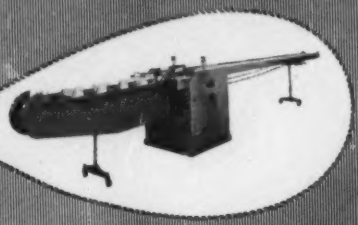

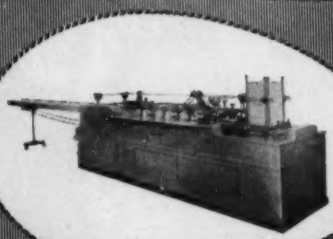

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This low-cost adjustable cartoner provides automatic features heretofore available only on very expensive equipment. Sets up and closes cartons automatically. Product is manually inserted.

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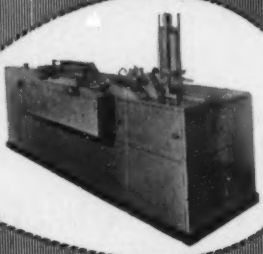

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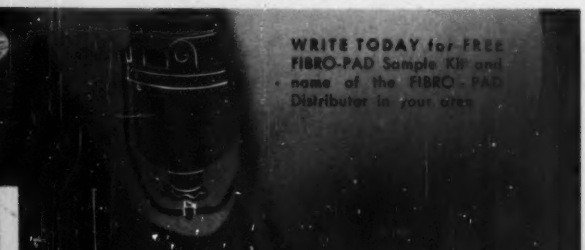
Inner Padding meets Spec. UU-C-843 Types I, II, III (pH 6.5—7.5)



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GRUEN

Cradled in uniquely handsome boxes of BEETLE Plastic, Gruen "Veri-Thin" and "Curvex" series of fine watches are *extra attractive . . . extra safe.*

BEETLE's rich-looking, hard-to-scratch finish and permanent color enhance the distinctive design...supply *extra sales appeal.* And on display counters, these BEETLE boxes won't readily attract dust...will stay clean longer to attract *extra customers.*

Thermosetting BEETLE affords protection, too. Unusually strong for its light weight, an important consideration in shipping, this fine-quality plastic is hard and stable ...stays that way through changing temperatures and passing years.

The Gruen Watch Company, like many other makers of fine products, found that BEETLE is priced right, molds easily and economically, resists staining, *and can be had in any color.*

So consider BEETLE for packaging... housings, closures, boxes, bases...both beautiful *and* practical.

Beautiful and practical, BEETLE boxes were molded for The Gruen Watch Company by Rathbun Molding Corporation, Salamanca, New York. More than 60% of Gruen watches sold are packaged in BEETLE urea plastic boxes.

AMERICAN *Cyanamid* COMPANY

PLASTICS DEPARTMENT

32C Rockefeller Plaza, New York 20, N. Y.

In Canada: North American Cyanamid Limited, Royal Bank Building, Toronto, Ontario, Canada

THE WELSH TERRIER is one of the oldest terrier breeds, originally used in hunting foxes and badgers. Today he is prized as a good-natured playmate for children. Height, 15 inches; weight, 20 pounds. The hard dense coat is black and tan.

To protect the reputation of your own product

Buy Boxes with a Pedigree

SHELF PACKAGES or cans which bear the scars of knocks and jolts of shipment can injure a brand name reputation which has taken years to build.

This is one reason why R. J. Reynolds Tobacco Company ships Camel Cigarettes in Union boxes—the boxes with a pedigree.

Union boxes stand up under all ordinary shipping conditions and deliver shelf packages fresh and unscarred to dealers' sales floors. So it is not surprising that every month finds more makers of national brand products shipping in Union boxes—the boxes with a pedigree.

Dependable Packaging Since 1872

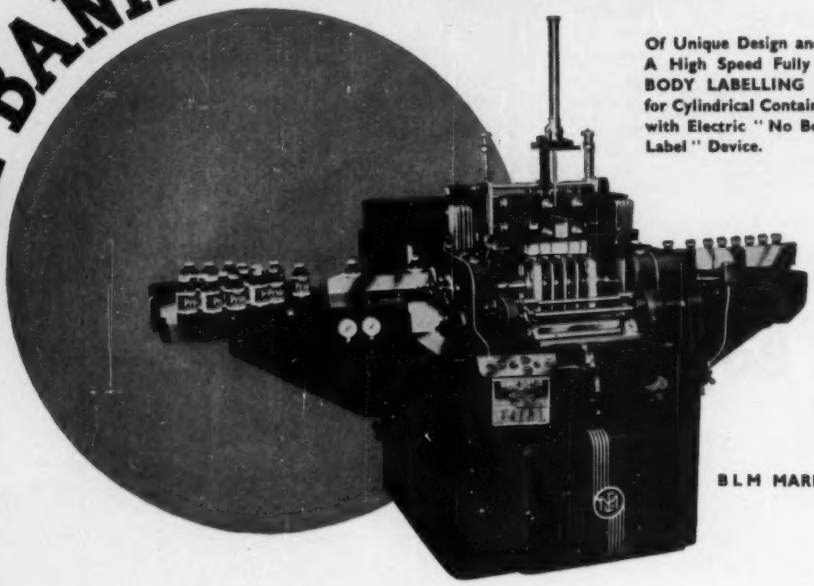
UNION Corrugated Containers

UNION BAG & Paper Corporation

Principal Offices: WOOLWORTH BLDG., NEW YORK 7, N. Y.

Corrugated Container Plants: SAVANNAH, GEORGIA • CHICAGO, ILLINOIS • TRENTON, NEW JERSEY

THE 'BANKS' LABELLER



Of Unique Design and Principle. A High Speed Fully Automatic BODY LABELLING MACHINE for Cylindrical Containers. Fitted with Electric "No Bottle — No Label" Device.

B L M MARK 3.

Precision labelling from 2,400—10,200 units per hour using one label stack only.

The "Banks" Labeller is simple to operate, occupies very little space, and positions the labels positively, accurately, and without any trace of surplus gum beyond the edges of the label, irrespective of the label shape or size.

Change from one size of container to another is obtained in a matter of seconds. Cleaning down takes only a few minutes.

Manufactured in 6 models suitable for use in Breweries, Mineral Water, Food, Cosmetic and Chemical Factories, etc.

Each model will label all round or part, up to the label width capacity of the machine, from ½" up to 12" wide.

B.L.M. Mark 1 will apply a label 3" wide x 4" deep.
B.L.M. Mark 2 will apply a label 4" wide x 6" deep.
B.L.M. Mark 3 will apply a label 12" wide x 6" deep.
All round or back and front or series labels within this area.

Please write for descriptive literature

Each of these models will accept diameters from 1¼" to 4½".

Models B.L.M. Mark 1.S or 2.S will accept diameters down to ⅜".

Over 1,000 machines are at work or on order for THIRTY Countries and 180 Towns and Cities in Great Britain.

***Manufactured* by Morgan Fairest Ltd. Sheffield. England**

fmc

STOKES & SMITH Co

PACKAGING MACHINERY **PAPER BOX MACHINERY**

Frankfort • Philadelphia 24, U.S.A.

Subsidiary of Food Machinery and Chemical Corporation

let EMPIRE BOX show you

HOW TO KEEP COSTS DOWN!

Smooth those ruffled feathers. Get an earful of Empire's realistic packaging that gives you top quality at the price you want to pay.

Empire's nearly half-century of experience enables it to save you money—without sacrificing quality. Reason: Empire controls quality from start to finish . . . produces its own paperboard . . . even blends its own ink . . . precision engineers every package . . . and provides a complete top-talent art department. In addition, you get added savings from Empire's multi-plant operation that lowers your costs . . . helps assure on-time delivery!

Call or write the Empire office nearest you today — put our specialists to work for you. The result will be a feather in your cap.

EMPIRE BOX
CORPORATION

CHICAGO, ILL. GARFIELD, N. J.

3 GREAT PLANTS TO SERVE YOU

FOR MILITARY PACKAGING

Excello-Seal

protective barrier materials

ROLLS • BAGS • ENVELOPES

★ ★ ★

A complete line of barrier materials covering packaging specifications including:

MIL-B-131A JAN-P-117 JAN-B-121
MIL-C-6056 MIL-E-6060 AN-B-20

★ ★ ★

FOR CUSTOM LAMINATING & COATING

We make functional and decorative products; Heat-Sealing Foils; Jar Cap Liner; Electrical Insulation; Laminated Foil and Board; Decorative Foil and Paper, colored and embossed; and special combinations of plastics, fabrics, foils and papers.

SALES OFFICES: BOSTON, CHICAGO, CINCINNATI, DECATUR, GA., DENVER, DETROIT, FT. WORTH, LOS ANGELES, NEW YORK, PORTLAND, KANSAS CITY

THE FLOYD A. HOLES CO.

Bedford, Ohio

Air Express and Freight are "rocketing"

Contemplate the figures for express and freight shipped by air these last few years, and you'll agree that "rocketing" is indeed the word.

From a mere 30,914,363 ton-miles of domestic and foreign shipments originating within the United States in 1945, the cargo flown in 1950 rocketed to an exuberant 211,893,725 ton-miles. An increase, that is, of 585% in six short years.

According to one of the largest U.S. airlines engaged in this zooming traffic, corrugated containers are the most common form in which goods are shipped by air. Naturally, naturally! Airborne freight and express must go to market in the lightest-weight "armor" that will land it there intact. For many shippers that means MEAD Liner and MEAD .009 Chestnut Corrugating, whose blend of chestnut and other hardwood fibers achieves the lightness-with-strength that is in demand today.

Mead Board is sold direct by **MEAD BOARD SALES, INC.** 3347 Madison Road, Cincinnati 9, Ohio

NEWARK 2, N.J. 786 Broad St. LYNCHBURG, VA. CHICAGO 6, ILL. 205 W. Wacker Drive

everyday

metal containers are proving their worth more and more to the merchandiser and consumer.

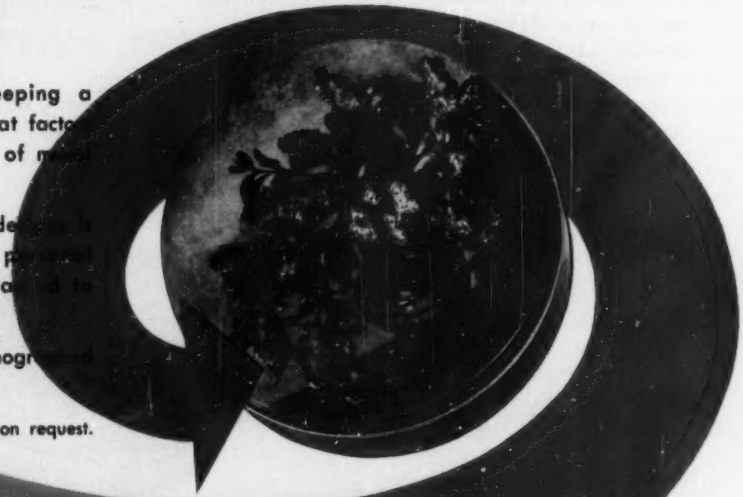
the durability of a metal container alone saves packaging grief in "breakage" when shipping and handling.

freshness, as well as keeping a product dry, also, are great facto in the growing popularity of m containers.

our ability to create new de at your disposal, or your p design can readily be ada our line of containers.

stock sizes in plain and lithogr designs also are available.

brochure and quotations sent upon request.



O L I V E C A N C O M P A N Y

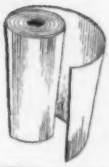
MANUFACTURERS OF PLAIN AND LITHOGRAPHED CANS

450 NORTH LEAVITT ST. • CHICAGO 12, ILLINOIS

Aluminum Packaging by Taranger

--serving the small and medium-size user

To a larger extent every day, packagers who haven't yet achieved "giant industry" size are turning to Taranger for printed and multi-printed aluminum foil, collapsible aluminum tubes and impact extruded aluminum packages. Taranger stresses *service* — therefore these small and medium-size companies know that their requirements will be handled promptly and efficiently . . . and that their orders will be filled with high quality, flaw-free aluminum packaging materials.



ALUMINUM FOIL Printed and multi-printed sheets or rolls, plain or custom laminated. For box wraps, candy, floral and gift packaging and other uses. A complete range of sizes, types and widths, converted or unconverted.

COLLAPSIBLE ALUMINUM TUBES Have you explored their use for packaging food products? Available with coatings, linings and decorating to your order. All sizes and types.

ALUMINUM IMPACT EXTRUSIONS Unique rigid packages (cylinders, tubes and bottles) that protect products from light, moisture, handling, etc. For cigars, cosmetics, foods, photographic, electronic and radio equipment and the like.

IS YOUR PRODUCT EXPORTED?
We have a money-saving arrangement of particular interest to companies which package products in aluminum for export. Ask for details.

E. Taranger, INC.
441 LEXINGTON AVENUE
NEW YORK 17, N.Y.

IT'S TARANGER . . . FOR SERVICE . . . IN ALUMINUM

POTDEVIN Packaging Equipment

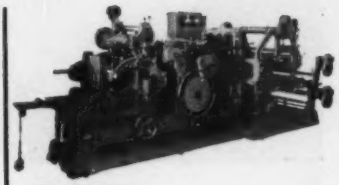
✓ Reduces Manufacturing Costs!
✓ Speeds-up Production!
✓ Improves Quality!

SELF-OPENING-SQUARE BAG MACHINES

High speed production of 11"x6"x2" shopping bag or multi-wall baler bags.

COATING MACHINES

Ductor roller design in 6, 9, 12 and 15 inch widths.



CELLOPHANE BAG MACHINERY

Models for single, duplex, flat-and-square, satchel-bottom bags.

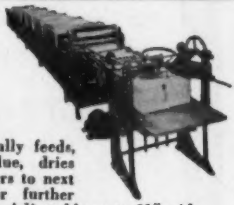
S.O.S. GROCERY BAG MACHINES

Converts rolls of Kraft or sulphite paper into finished, trade-marked bags. Adjustable for ¼ lb. to 35 lb. inclusive.

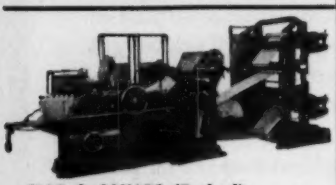
OIL INK PRINTING PRESSES

Wide range of types and sizes including one to six colors for drinking cup paper, coffee, sugar, flour bags, cellophane, glassine, parchment, etc.

STRIP GLUERS



Automatically feeds, applies glue, dries and delivers to next station for further processing. Adjustable up to 21" wide.



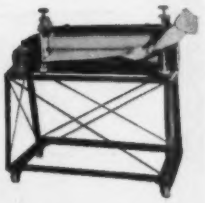
FLAT & SQUARE (Tucked) PAPER BAG MACHINES

High speed production of grocery, notion, millinery, shipping container and large specialty bags. Adjustable for large range of sizes.

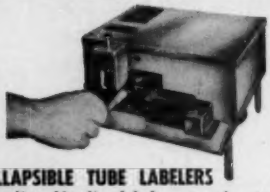
SHEET COATING MACHINES

For any type hot or cold material. Sizes up to 46 inch widths and larger for sheet or roll coating.

ROTARY COMBINING PRESSES



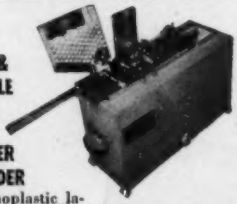
High speed combining of glued materials up to ½" thick and 30" wide. For hand feeding flat sheets or in production line for web materials.



COLLAPSIBLE TUBE LABELERS

Applies 32 slip labels per min. to collapsible tubes. Automatically forms label and ejects label on tube. Machines for ⅛, ¼, ½, 1 ounce tubes.

VIAL & AMPULE LABELER & CODER



Thermoplastic labelers in 1, 2, 3, 5 and 10 cc sizes. Hopper automatically feeds vial or ampule for labeling and coding.

SACK (Satchel-Bottom) PAPER BAG MACHINES

Wide range of sizes for making single or multi-wall poultry, charcoal, potato, flour sacks and shopping bags.

POTDEVIN has been designing and building superior quality equipment for the packager since 1893. Consult our engineers on any problem. No obligation.

Write for detailed information on any equipment illustrated in this ad.

POTDEVIN MACHINE CO. 244 North St., Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

fisher's foils

keep sales UP!

FISHERS FOILS LTD · EXHIBITION GROUNDS · WEMBLEY · MIDDLESEX · ENGLAND

TELEPHONE WEMBLEY 8001 CABLES: FOILS WEMBLEY (ABC CODE 6TH EDITION)

The ultimate of quality, care, craftsmanship ...go into *Rowell Boxes*

The creative art of the master pottery-maker finds its counterpart in the exacting skill Rowell devotes to making fine set-up boxes . . . a skill known by packagers everywhere

E. N. Rowell Co. Inc.
Mfrs. Fine Paper Boxes
Batavia,
N. Y.

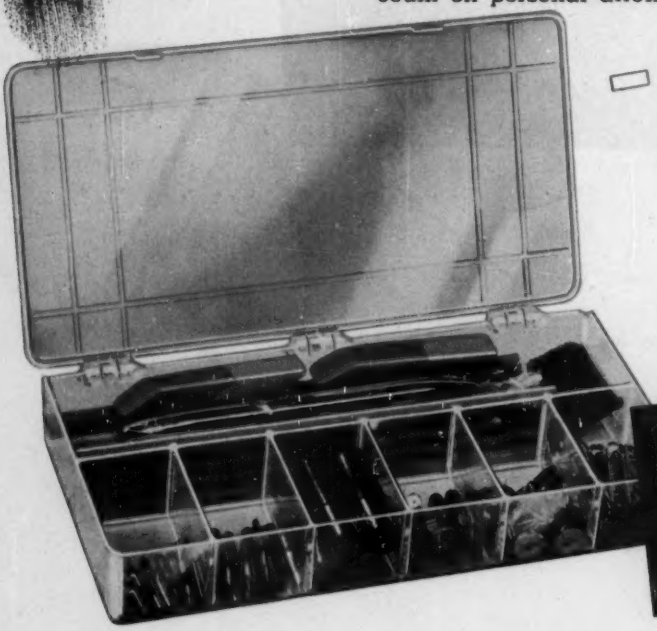
WINNING SALES PACKAGE

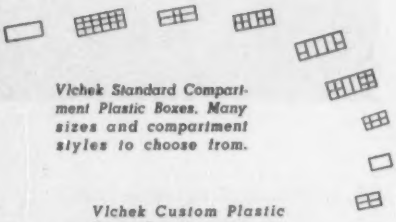
Alert merchandisers of office materials—pencils, pens, paper clips and thumb tacks find that this Vlchek Plastic Box helps them sell more merchandise, more conveniently.

Completely transparent, durable, very compact and organized, the box appeals to space-conscious traveling men and to those whose needs are confined to offices. Perfect for display, it shows as many as 10 different items—*multiple selling.*

Our Packaging Specialists have helped provide boxes that successfully package and sell products such as foods, cosmetics, hardware, cutlery and others—wherever assortments are important.

Let's talk over your packaging problems. You can count on personal attention and dependability.





Vlchek Standard Compartment Plastic Boxes. Many sizes and compartment styles to choose from.

Vlchek Custom Plastic Boxes. Any size—any contour—variety of colors—economical in any quantity.

PLASTICS DIVISION
THE VLCHEK TOOL COMPANY
3001 East 87th Street
Cleveland 4, Ohio

No. 3 in a series

The CLEVELAND CONTAINER COMPANY presents the third in a series of informative messages to assist all manufacturers, distributors or sellers of products which require more efficient, economical and attractive packaging.

FUNDAMENTALS OF CONTAINERS IN PACKAGING!

Type No. 3—METAL END SLIP COVER CANS

Metal End Slip Cover Cans are used for packaging dry products such as chemicals, drugs, insecticides, and food-stuffs. Specialty items, as belt dressing compounds, fire extinguisher charges, caulking compound, tank balls and spare parts are but a few products which also can be used in this type of container.

WIDE RANGE OF SIZES . . . Available in diameters of $\frac{7}{8}$" to $4\frac{5}{16}$", lengths as desired.

THIS CONTAINER is spirally wound of two or more plies closely butted to form a smooth rigid wall construction held to constant outside diameters by use of uniform gauge chipboard. The result ensures proper fit of the fixed diameter metal slip cover.

CLOSURES . . . The bottom of the container is a disc of tin-plate having a deep draw to ensure a generous and tight seaming to the sidewall of the container. The metal slip cover is formed of heavy tin-plate, and is shipped separately from the container.

PRICE ADVANTAGE . . . Like our plain all-fibre cans which are the lowest price in the field of fibre cylindrical containers, the metal slip cover cans are the lowest price in the field of metal end fibre side wall containers.

* * *

WHY PAY MORE?

For the Best . . . Call Cleveland!

SPECIAL FEATURES . . . In keeping with all types of fibre sidewall containers, the Metal End Slip Cover Can may be provided with a wide range of inner liners to ensure moisture or grease resistance. Paraffin, glassine, parchment, aluminum foil and anti-corrosive paper are most frequently used. For special use, liners such as cellulose acetate or other plastic films are available. Within size limitations, containers may be printed in one color or continuous printed or plain color wraps may be spiralled on the outside.

Labels to customer specifications can be applied. Metal ends can be produced in colors using lacquer or baked enamel. Customer trade marks or identifying matter may be embossed in the metal ends.

SAFETY IN DELIVERY of Cleveland Containers is ensured by packing in high-test corrugated shipping cartons. Ease in handling and conservation of valuable storage space result from such shipping practice.

* * *

The CLEVELAND CONTAINER Co.

6201 BARBERTON AVE. CLEVELAND 2, OHIO

• All-Fibre Cans • Combination Metal and Paper Cans
• Spirally Wound Tubes and Cores for all Purposes

* *

PLANTS AND SALES OFFICES: Cleveland, Detroit, Chicago, Plymouth, Wisc., Jamesburg, N. J., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland
SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington Gas Light Bldg., Washington, D. C.; West Hartford, Conn.; Rochester, N. Y.
Cleveland Container Canada, Ltd., Prescott, Ontario • Offices in Toronto and Montreal

Write for additional copies of this message.

HOW WOULD EMBOSSED FOIL SEALS LOOK?

The sketches we design give a perfect picture of how much beauty and dignity foil seals add to the products, anniversary, convention or similar events. How would embossed foil seals look? It's so easy to find out . . . FREE! with the coupon below.

IT'S EASY TO FIND OUT *FREE!*

How would foil seals look? On products, letterhead, labels, seals or booklet

Please send me a sketch on ☐ GOLD ☐ SILVER foil approx. size.....with the following copy

.....

.....

My Name.....

Company.....

Address.....City.....

Approx. Quantity.....

Designers and Producers of Fine Labels

Labelsmiths *GUMMED or UNGUMMED • HEAT SEAL PRESSURE SENSITIVE *ALL AT LOWEST PRICES*

a. m. steigerwald company

910 W. VAN BUREN ST., CHICAGO 7, ILL. TAYLOR 9-5400

CHARLOTTE, MICH.
L. N. Clark
612 So. Pleasant St.

***The same offer is good for other types of Labels**

CLEVELAND	DANVILLE, ILL.	LOUISVILLE	MEMPHIS	MINNEAPOLIS	NEW YORK, N. Y.	OAKLAND	ST. LOUIS
A. C. and J. S. Foster	F. F. Michaelfelder	Joe Herrmann	Edward Magnus	J. E. Moor	John H. McLaren	Joan S. Pouten	Marvin & Phil Yates
310 Hippodrome Bldg.	1298 Sheridan St.	416 Jefferson St.	278 S. Front St.	3329 DuPont Ave., So.	646 W. 125th St.	608 Sixteenth St.	Arcade Bldg.
CHerry 1-3468	DAnville 44473	WAbash 1257	MEmphis 8-2574	LOcust 5309	MOnument 2-0237	TEmplebar 2-1745	GArfield 0741

protects as it sells...

SUPER-PROTECTION

The exclusive two ply construction gives A&S Super Gloss two ply bags extra strength...added product protection from packer to consumer. Laboratory drop tests and supervised commercial shipments prove Super Gloss two ply bags deliver the goods safely and provide longer shelf life.

SUPER-SALES

With self service shopping in super markets, the packages that sell themselves must have a maximum of shelf attraction. The Super Gloss Hi-White coating keeps inks on the surface, providing sparkling bright printing that "stands out in the crowd."

SUPER-SERVICE

Send for samples of Super Gloss two ply A&S bags—your requests will receive the prompt, intelligent attention that has been the keystone of Arkell & Smiths' customer policy for four generations.

ARKELL & SMITHS · THE OLDEST NAME IN PAPER BAGS · AS

ARKELL and SMITHS

CANAJOHARIE, N. Y.
WELLSBURG, W. VA.
MOBILE, ALA.

SAVE HALF YOUR MONEY

...OWN A Hayssen Automatic WRAPPING MACHINE

• High-speed, low-cost wrapping for cheese and dairy products. A Hayssen Wrapping Machine costs you less than you think and occupies about half the usual floor space. One operator can feed and take off 35 or more units per minute. The Hayssen Dairy Wrapping Machine is rust-proofed to protect it against damp and wet packaging conditions.

A FULL LINE OF MACHINES WRAP ALMOST ANY SIZE, ANY SHAPE PACKAGE of CHEESE, BUTTER, ICE CREAM

The Hayssen gives you a neat, tight, fresh-looking package that resists handling wear-and-tear and protects the product against contamination. It handles heat-sealing cellophane, Kling-seal, Para-kote, pliofilm, foil, waxed paper. Your brand name is always registered perfectly on all sides of the package. Special attachments are available. Over 42 years' experience gives Hayssen machines unmatched performance, low first cost, overall economy of operation and maintenance. Many Hayssen units are in use today that were bought over 20 years ago.

WRITE for Bulletin describing the Hayssen Automatic Wrapping Machine for dairy and ice cream plants. Tell us your wrapping problem — we have the answer.

IT PAYS TO WRAP THE HAYSSEN WAY

Hayssen MFG. COMPANY

Dept. MP-9, SHEBOYGAN, WISCONSIN

Since 1910, One of the World's Largest Manufacturers of Wrapping Machines

Ever wonder why it disappeared?

The old-fashioned country store has just about disappeared from the American scene. No more cracker barrels . . . no more milk dippers . . . no more coffee bins.

One of the principal reasons for their disappearance was the availability of modern containers such as the vacuum-pack, key-opening coffee can shown below.

Many such containers were pioneered by American Can Company during its fifty-one years of originating and improving containers to help people live better.

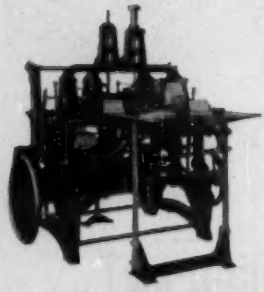
Canco, *the most versatile manufacturer in the industry,* will continue to pioneer improvements for its customers.

AMERICAN CANCO CAN CO.

CONTAINERS—to help people live better

AGAIN the choice is **US**

Necco's carton for chocolate mints is made on STANDARD BRIGHTWOODS



the **STANDARD BRIGHTWOOD** Forms hinged-cover, telescope, trays, and tapered boxes in a wide variety of sizes at speeds up to 60 or more finished boxes per minute. High Speed Models also available.

Manufacturers who produce their own boxes and cartons, as well as commercial box makers are sold on U. S. Automatic carton-forming machinery because they can rapidly turn out precisely-formed, solidly-glued boxes. The New England Confectionery Company, manufacturers of famous Necco candies, use Standard Brightwood machines to make the chocolate mint cartons illustrated. Should a new design be developed or a different size be required, these Standard Brightwoods may be changed over easily and quickly to handle other sizes of cartons.

And it is this speed and versatility that appeals to the commercial producer who is called on continually to turn out varying sized cartons in large quantities and often on short notice. Whether you produce boxes for your own use or for others, it will pay you to learn the advantages you can enjoy when you use packaging machinery made by ***US.*** Write ***US*** today, giving complete details of your problem.

U. S. AUTOMATIC BOX MACHINERY CO., INC.
Owning and Operating NATIONAL PACKAGING MACHINERY CO. ★ CARTONING MACHINERY CORP.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Cleveland ★ Chicago

Net and Gross Weighing
Package Forming and Filling
Carton Sealing, Lining,
Wrapping, Box Making

HIGHEST QUALITY ALUMINIUM FOIL

checks harmful oxidation

retards discoloration and rancidity

inhibits odor formation

ONE of the problems of waxed paper and paper board manufacturers is the oxidation of wax. Oxidation causes discoloration and unpleasant odors. In certain specialty waxed papers it can also mean loss of tensile strength and a lowered melting point.

Oxidation is accelerated by prolonged high temperatures in the wax bath. When coating with certain wax blends, however, high temperatures are necessary.

DBPC has been found to be ideal for inhibiting oxidation in wax. Fractional percentages (0.01—0.05%) greatly increase the life of paraffin wax even when it is subjected to temperatures as high as 300°F.

Di-tertiary-butyl-para-cresol (DBPC) is a tri-alkylated phenol which is insoluble in water and aqueous alkali of any strength. Because of its unique chemical structure, DBPC, unlike most phenol derivatives, is practically non-toxic. It is odorless and tasteless.

Tests show that DBPC is a practical and economical antioxidant for waxes. It has also been used with success as an antioxidant in rubber, fatty acids, lubricating oils, grease, transformer oil, turbine oil, gasoline, and jet fuels, among others.

For detailed technical information concerning DBPC, return this coupon.

KOPPERS®

KOPPERS COMPANY, INC.
Chemical Division, Dept. MP-9
Koppers Building, Pittsburgh 19, Pa.

Koppers Company, Inc.
Dept. MP-9, Pittsburgh 19, Pa.

Please send me a free copy of your Technical Bulletin on Koppers DBPC.

Name.....

Company.....

Street.....

City.....State.....

...e bag...

and some boiling water...

make a cup of

Full Flavor* Coffee!

The Family Products Company has done something novel and for the convenience of coffee lovers . . . they've packed freshly ground coffee in little bags and vacuum packed them in jars. Just drop a bag into a cup, pour boiling water over the bag, press it to the bottom of the cup three times. Allow to brew two or three minutes, and you have a cup of full flavored coffee.

The closures that seal this vacuum packed product are Crown Screw Caps with Slip Rubber Rings . . . they provide dependable protection for the freshly ground coffee flavor and make an excellent re-seal. An ever increasing number of packers are finding that Crown Closures meet their needs from all angles . . . production . . . sealing . . . customer satisfaction. Let your Crown Closure Representative tell you about the advantages of Crown Screw Caps and Lug Caps . . . and explain Crown's Customer Service. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

**Full Flavor Coffee Bags are distributed by Family Products Company, Philadelphia, Penna.*

CROWN CLOSURES

Approved by millions of housewives

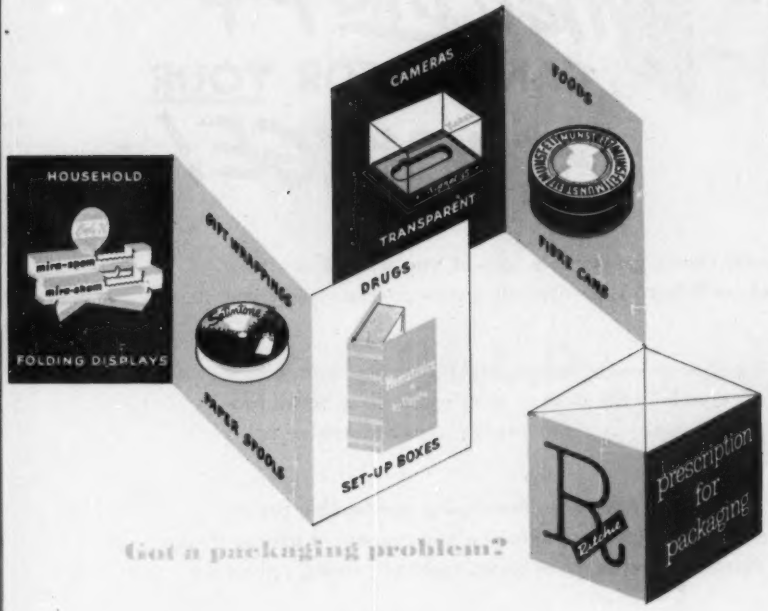
WIDE OR NARROW...SIZED TO YOUR SPECIFICATIONS
Chesiene
POLYETHYLENE
Tubular Film
BE RIGHT — WRITE
for full details...let Chester solve your specific packaging and lamination problems...supply you with a list of converters of all Chester products.
CHESTER

HIGH STYLE

FOODS
RUSSO'S
FOLDING CARTONS
COSMETICS
ROUND BOXES
CAMERAS
SET-UP BOXES

send your product to market in an advance-styled Ritchie package and your own sales figures will prove it: high style is *buy* style!

IS BUY STYLE



You don't have to sacrifice a thing (not even economy) to achieve high style—*Ritchie style*—in your packaging. Our design department will help put your packages in the fashion forefront, yes—but they'll make them so they're *practical*, too. So they pack and stack and protect what's in them. *And so their cost is right.*

Got a packaging problem? refer it to **Ritchie!**

. . . and now Ritchie is high styling folding cartons

Yes, it's a new service at Ritchie—a special department to design folding cartons . . . up-to-the-minute facilities to manufacture them. For further information on this or any other Ritchie service, write today for the free booklet, "101 Ways to Get Better Packaging."

W.C. Ritchie AND COMPANY

8347 Baltimore Ave., Chicago 17, Illinois
Offices in Principal Cities

See what this paper CAN DO FOR YOUR PACKAGE!

● For sparkling color effects, greater sales appeal, you won't find a finer base paper than Nibroc White*... particularly if your product is packaged in a bag or sack.

● Nibroc White is an exceptionally tough, highly flexible sheet with a fine printing surface especially for all-over printing. It gives better protection—greater wet strength—is more pliable—more durable—helps make products more salable!

● For more than 50 years we have been developing outstanding papers like Nibroc White—papers engineered to meet a wide variety of packaging needs. Papers that handle better, print better, speed processing, reduce costs!

● Our Technical Service people will be glad to work with you to get a paper "tailored" to *your* specific needs—paper that will do the job better, faster, more economically. Write Dept. DR-9, Boston.

*Sold only to converters

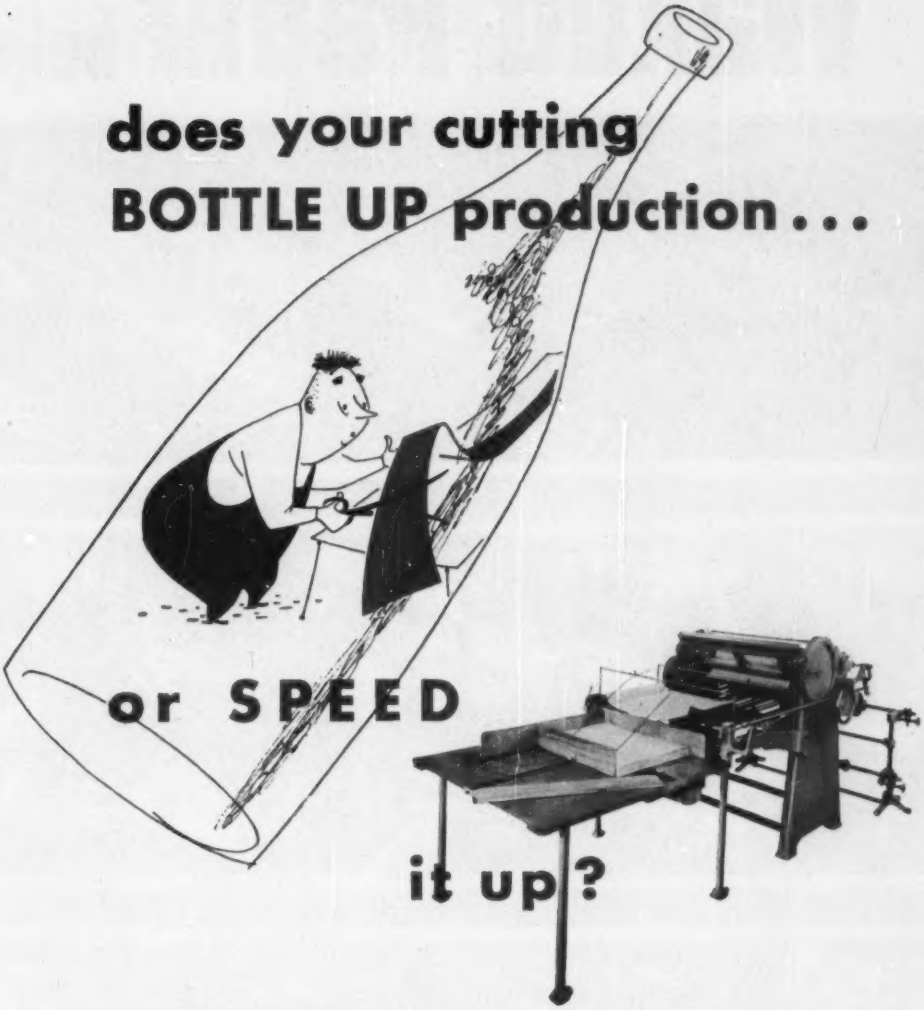
PAPER helps the PACKAGE make the SALE

BROWN COMPANY, Berlin, New Hampshire
CORPORATION, La Tuque, Quebec

General Sales Offices: 150 Causeway St., Boston 14, Mass.—Dominion Square Bldg., Montreal, Quebec

SOLKA & CELLATE PULPS • SOLKA-FLOC • NIBROC PAPERS • NIBROC TOWELS • NIBROC KOWTOWLS
BERMICO SEWER PIPE, CONDUIT & CORES • ONCO INSOLES • CHEMICALS

does your cutting BOTTLE UP production . . .

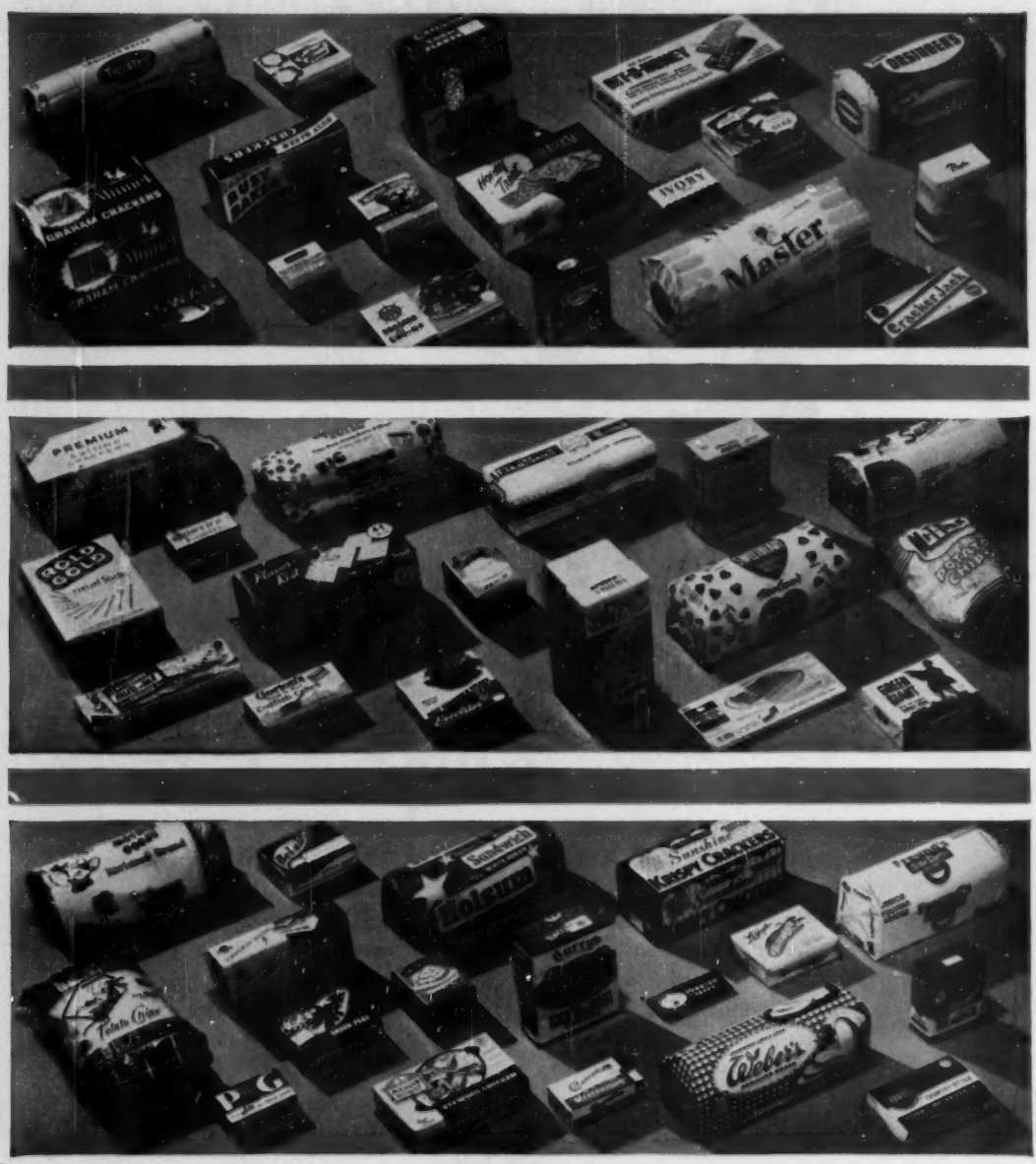


or SPEED it up?

The old way's slow but sure — sure to waste valuable time and money! Today's production pace demands cutting that's fast, cutting by a Sheeter. Speed is one of *many* Sheeter advantages. Take savings, for instance . . . a Sheeter cuts production costs so low it usually pays for itself in months. There's versatility, too . . . a Sheeter cuts any of your materials in any size, any quantity, any time. More facts? They're yours for the asking.

CHARLES BECK MACHINE CORPORATION
406 N. 13th Street BECK Philadelphia 8, Pa.

Waxed Paper helps



SELL YOUR BRAND... MORE PROFITABLY... WITH

sell these brands at low cost!

How waxed paper can help build *your* profits

STRONG BRAND IDENTIFICATION

You build sales when your packaging ties in with your *brand* advertising and promotion. Colorful waxed paper packaging makes *your brand* stand out on the shelf . . . gives you substantial packaging savings, too.

MAXIMUM DISPLAY VALUE

A basic family design on low-cost waxed paper packages ties your entire line together. You get strong display of *your brand* at the point-of-sale . . . and added volume from the money you spend to advertise your fastest moving items.

UNIFORM PRODUCT APPEARANCE

Waxed paper packaging builds consumer confidence . . . and *repeat* sales. For accurate product illustrations look uniformly fresh, flavorful, and appetizing always . . . give *your brand* proven sales appeal.

Successful food merchandising . . . is brand merchandising

MODERN WAXED PAPER

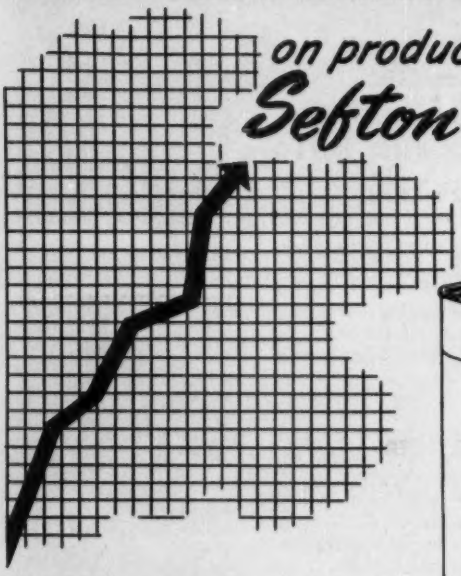
waxed paper protects freshness

WAXED PAPER INSTITUTE, INC., 38 S. DEARBORN ST., CHICAGO 3, ILL.

MONOSODIUM GLUTAMATE • CHEESE • MOTH CRYSTALS • FROZEN FOODS • FRUIT • ADHESIVE TAPE
TEA • VETERINARIAN SUPPLIES • CLEANSER • DETERGENTS • PISTON RINGS • SPICES • GIFT PRESERVES
TIRE PATCHES • CANDY • ICE CREAM • COFFEE • MEDICATED BANDAGES • AUTOMOTIVE REPAIR PARTS

BIG RETURNS....

on products packaged in
***Sefton's** string-opening cans*



Sefton's packaging pays off... in lasting protection for your product! Whether you've a brand-new product or an old favorite, Sefton's string-opening can is the perfect package for you! Choose the one-use style or with built-in re-closure ... all factory-sealed, tamper-proof and easy to open! Let Sefton solve your packaging problems!

PAPER CANS...
SPIRAL AND CONVOLUTE
PAPER AND METAL ENDS
ROUND AND IRREGULAR SHAPES
TUBES AND HEAVY CORES

Sefton
FIBRE CAN COMPANY
HOME OFFICE
3275 BIG BEND BOULEVARD,
ST. LOUIS 17, MISSOURI

PLANTS: ST. LOUIS • NEW ORLEANS
PORTLAND, ORE. • PIQUA, OHIO
DIVISION OF CONTAINER CORP. OF AMERICA

DISTRICT OFFICES: Atlanta • Boston • Chicago • Denver • Detroit • Los Angeles • Memphis • Nashville • New Orleans
New York • Piqua • Portland • Salt Lake City • St. Paul

Packaging, originated and produced by CENTRAL STATES is *Saving Labor* in scores of industries

LABOR SAVING HAM BAG

FORMERLY: Handling 3 separate sheets in three separate wrapping operations and tying with twine.

NOW: Central States Ham Bag has 3 sheets sewed together in bag form. Ham is quickly slipped in, bag sealed with tape. No loose ends, no twine to slip, better display face. Labor saving 35%—45%.

LABOR SAVING KRAFT TUBING

FORMERLY: Sheets of paper fastened with gummed tape were used for wrapping knocked-down window and door frames.

NOW: A simple fixture holds stacked lumber while being inserted into continuous kraft tubing. No paper waste, faster production, labor saving of 50%.

LABOR SAVING NEWSPAPER BAGS

FORMERLY: Newspapers wrapped in sheets of paper, giving inadequate protection against the weather.

NOW: Waterproof Delivery Bags give complete protection to papers. Attractive printing adds advertising value. Easily handled, papers slide in quickly. Labor saving 60%

LABOR SAVING MEASURED CARLINERS

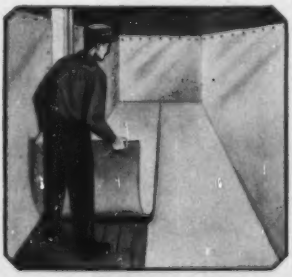
FORMERLY: Large rolls of paper carried into freight car, unrolled, measured out, cut off and tacked up.

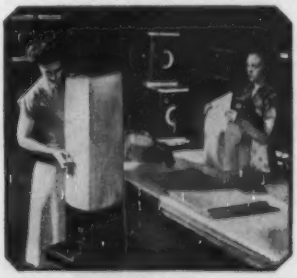
NOW: Pre-cut Carliner Sets exactly fit walls and floors. No waste, no measuring or cutting. Labor saving 80%—85%.

LABOR SAVING LUGGAGE BAGS

FORMERLY: Plain kraft paper used for wrapping. Slow operation required large packing department.

NOW: Bags made to fit standard luggage sizes quickly slip over bags, are easily sealed with strip of tape. Smaller force handles same output with less waste. Labor saving 60%.





LABOR SAVING ON YOUR PACKAGING JOB

Let's get together to work on your packaging operations . . . to save labor, cut costs and improve production. Our Sales Representatives are in all principal cities, ready to help. Call or write today.

Every industry benefits from packaging by . . .

CENTRAL STATES PAPER & BAG CO.

5221 NATURAL BRIDGE • ST. LOUIS 15, MO.

Offices in Principal Cities

PLANTS: ST. LOUIS • SALT LAKE CITY • AUBURN, WASH. • BEACON, N. Y.

Acetate Windows . . .

high-powered sales appeal for low-cost packaging

Up-to-date merchandisers depend on transparent windows in bags and envelopes to give them the sales advantage of transparency at mininum packaging cost.

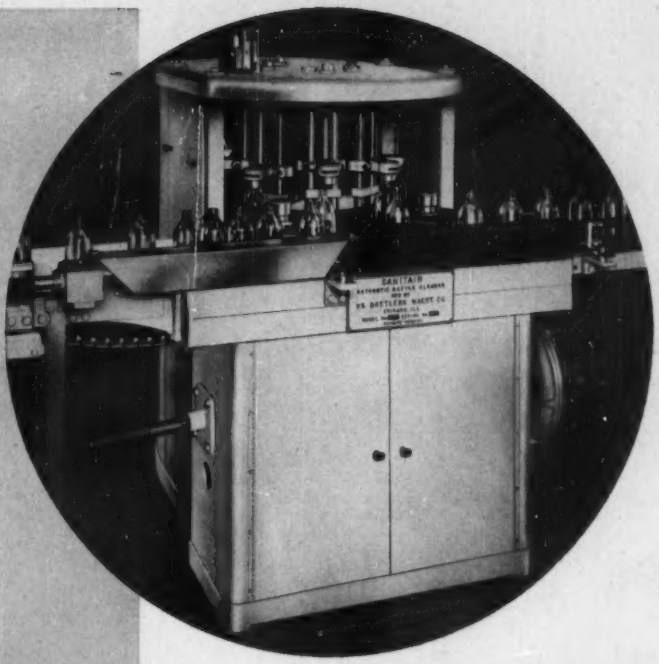
Celanese* acetate transparent film makes the perfect window. It is sparkling clear . . . flat, smooth, non-cockling . . . non-fogging, waterproof and greaseproof.

Ask your supplier about hard-selling bags and envelopes with windows of acetate. Or write Celanese Corporation of America, Transparent Films Dept. 108-I, 180 Madison Avenue, New York 16, N. Y. In Canada, Canadian Chemical & Cellulose Company, Ltd., Montreal and Toronto.

*Reg. U.S. Pat. Off.

Celanese® Acetate

TRANSPARENT FILM



The Most Efficient Method of Air Cleaning New Containers

Positive Cleaning Action at all Speeds

Here is a machine that gives you: Complete Automatic Operation; Automatic Controls; Variable Speed Control with a 2 to 1 Ratio; Unbeatable Cleaning Performance and a speedy Changeover from any container size to another, including AGST and wide mouth finishes. These features together with exclusive U. S. engineering innovations have given the Sanitair Automatic Air Bottle Cleaner world-wide popularity.

What you cannot see in the illustration is most important to you. The Sanitair Bulletin shows in detail the automatic machine operation; it illustrates the exclusive double action cleaning which you will want; the advanced type worm feed and the amazing new friction drive clutch that eases mechanical strain to unprecedented smoothness. You will particularly like the "plus" factor of long-life ruggedness in construction. Send at once for complete details; ask for the "Sanitair Bulletin."

US

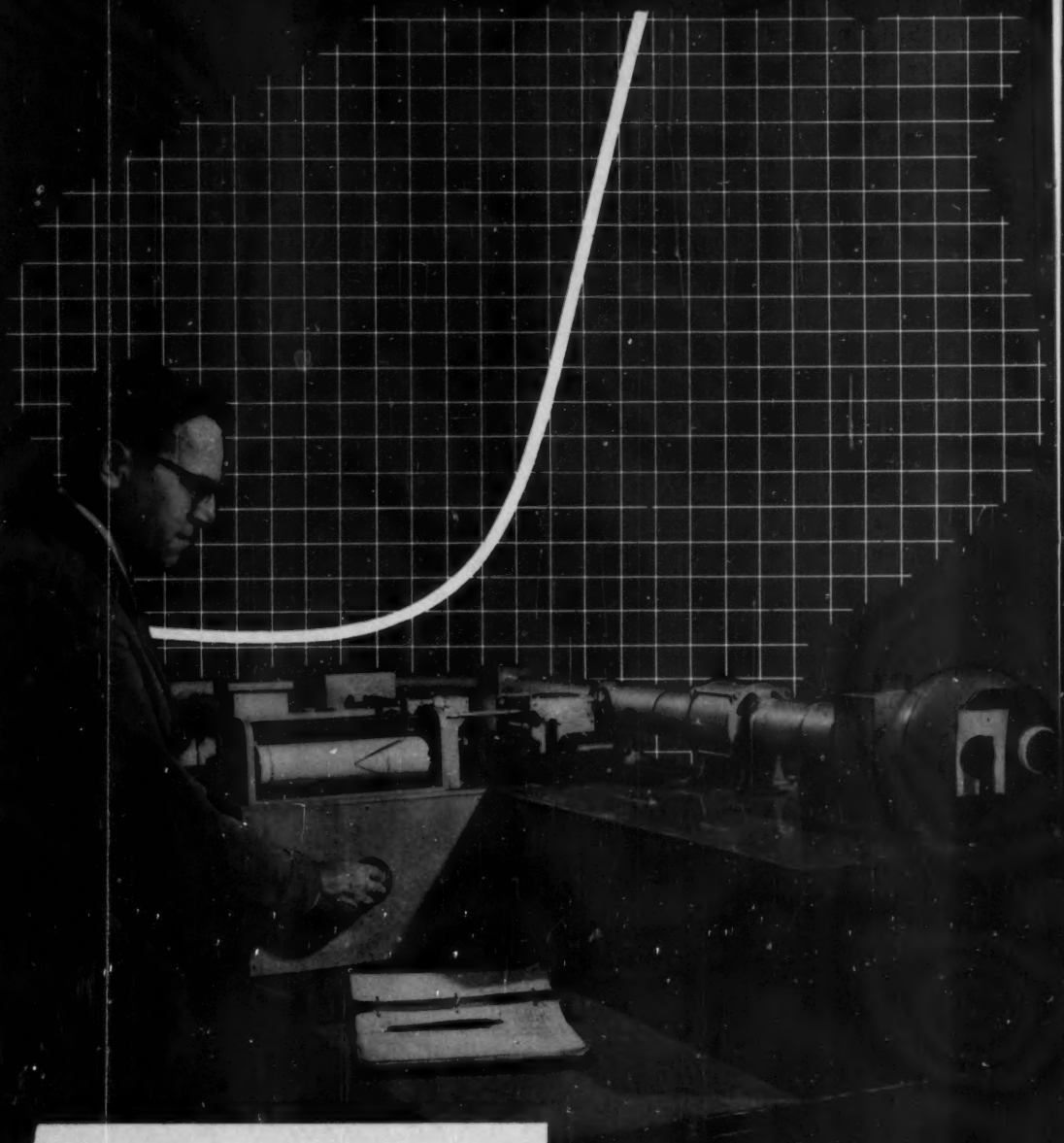
Sanitair
AUTOMATIC AIR BOTTLE CLEANER
Synchronizes Into Production Lines

U. S. BOTTLERS MACHINERY COMPANY

4017 N. ROCKWELL STREET • CHICAGO 18, ILLINOIS

OFFICES: Boston • New York • Philadelphia • Houston • Dallas • San Francisco • Los Angeles • Denver • Seattle • Portland • Phoenix • New Orleans • Tampa • Atlanta Montreal • Toronto • Vancouver • Winnipeg • EXPORT OFFICE: Toledo, Ohio

THE WORLD'S MOST



A FURTHER EXAMPLE
OF IPI RESEARCH
AT WORK FOR YOU

RELY ON IPI

SENSITIVE EYE FOR COLOR

. . . Gives You Precise, Permanent Standards for Color Control

Here is a precision laboratory instrument to measure and record color automatically and accurately. It is the General Electric Recording Spectrophotometer—the first one of which was built specially for the IPI Research Laboratories by G-E engineers.

A trained human eye can distinguish among one hundred thousand colors. The Spectrophotometer identifies millions . . . measures and analyzes them . . . writes its own exact and permanent record of any color sample.

While all pigments change with time, the curve plotted by the Spectrophotometer remains unchanged over the years. The original color could be accurately reproduced tomorrow or one hundred years hence for checking against your visual color standards.

But the precise measurement of color is only one of the many important contributions to printing ink progress that have come from IPI's broad program of fundamental research. Another is the development of new inks that have revolutionized letterpress printing and offset lithography.
One example is IPI Vaporin Inks that heat-set in a split second and are largely responsible for today's high speed magazine printing. And there is the IPI Tri-Metal Plate—the first successful, long life offset plate capable of highest quality reproduction.

This "passion for improvement" is the working philosophy behind all IPI research. Scores of project groups are constantly at work in the IPI laboratories . . . concentrating all of their efforts on the development and improvement of printing inks that will best serve the changing needs of printers everywhere.

It is this IPI leadership in ink research that gives you the greatest assurance of continued high quality in printing inks. You can always rely on IPI—for better inks, better printing.

INTERCHEMICAL CORPORATION

Printing Ink Division • *67 West 44th Street, New York 36, New York*

FOR LEADERSHIP IN INK RESEARCH

FOR BETTER PROTECTION

BAG IT

THE VANANT WAY

Engineered protection and economy go hand in hand when you use Vanant bags. Whatever type and style of flat or square (gusseted) bag your product requires, Vanant makes it. Modern high speed machines fabricate, to your specifications, any available material from plain kraft papers to the laminated, glassine and other greaseproof and waterproof types. Be sure to check with Vanant before you buy!

Ask Your Vanant Field Engineer About the New V-C-I*, Lined DUPLEX Bag

GLASSINE LAMINATED

WAX COATED KRAFT

GRADE A MILITARY SPECIFICATION

*Volatile Corrosion Inhibitor

WATERPROOF ASPHALT-KRAFT (Such as 30/30/30)

WET STRENGTH KRAFT

VANANT

ENGINEERED PACKAGING

730 W. Virginia St., Milwaukee, Wis.

Plant: Tomah, Wis.

Also Converters of Military Specification

BAGS BARRIERS CASE LINERS

POLYETHYLENE AND OTHER TRANSPARENT FILMS

R. M. Buettner & Assoc. Nuzum Bldg. Dayton, Ohio

Allied Commodities Co. 632 Dwight Bldg. Kansas City 6, Mo.

Jay Jeter & Assoc. 77 Warren Bloomfield, N. J.

Jerry Goldsmith Assoc. 600 Washington St. Hamden, Pa.

Standard Parts & Equip. Co. 304 W. Hault Fort Worth, Texas

W. T. Bogardus 532 1st Avenue W. Seattle 1, Wash.

Allied Commodities Co. Sabree Bldg. Hammond 6, Ind.

King & Anderson 1035 Market St. San Francisco 3, Calif.

Jerry Goldsmith Assoc. 1814-3 Mooney Bldg. Baltimore 2, Md.

Protective Packaging Co. 342 S. Dearborn St. Chicago 4, Ill.

King & Anderson 5655 N. Pioneer Dr. Los Angeles, Calif.

American Paper Co. 827 So. 108th St. Milwaukee 4, Wis.

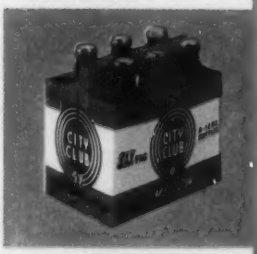
EVERYWHERE! ANYWHERE! IT'S ACM CARTONS!

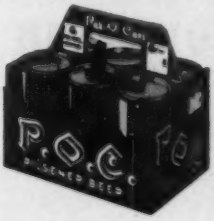
The brewing industry packages 74.1% of its output in carriers, such as these.

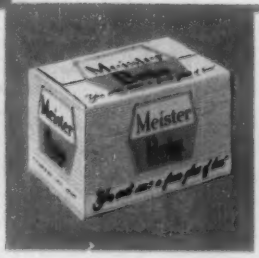
Other industries, quick to realize the impact of colorful, eye-catching cartons on impulse sales, are more carton-conscious today than ever before. No advertising campaign can be a success without a carton that will move the consumer to choose *your* carton—at the point of purchase.

ACM cartons—printed on our high-speed presses on the famous American double coated board made in our own mills—can help you sell and move merchandise.

ACM's facilities offer a complete development and processing operation. A letter, wire, or phone call to the American Coating Mills Corporation will bring an ACM representative to your plant for a "no cost to you" consultation on your packaging problems.







AMERICAN COATING MILLS CORPORATION

ACM CARTONS **CLAYCOATED BOXBOARD**

Subsidiary of Robert Gair Company, Inc.
General Offices: Board of Trade Bldg., Chicago 4, Illinois
Offices in Principal Cities

Another Top-of-the Ladder Product that's NASHUA PACKAGED

Sales success is no accident. For that very reason, many a manufacturer with a good product gives it the added advantage of wraps by Nashua.

In this case, for example, the requirements called for waxed paper to protect freshness . . . plus clean, uniform printing that does a lot to help win the battle for impulse sales.

It's a good idea to use Nashua's experience in solving your packaging problems. Give us a call, any time.

NASHUA CORPORATION

NASHUA, NEW HAMPSHIRE

formerly Nashua Gummed and Coated Paper Company

NASHUA

CREATIVE PACKAGING HEADQUARTERS

PRINTED FILM • WAXED WRAPPERS • BOX PAPERS • BOX STAYS
GUMMED PAPERS • HEAT SEAL PAPERS • FLOCKED PRODUCTS
PARTY PAPERS • PRINTED BANDS • CORRUGATOR'S TAPE • SEALING TAPE • MOISTENING MACHINES • TECHNICAL PAPER PRODUCTS

VOLUME 26
NUMBER 1
SEPTEMBER 1952

Modern packaging

1. POWERFUL DESIGN is imperative to make "your brand" stand out from the crowd as exemplified by these forceful new packages for Northrup, King & Co.'s Golf Lawn Seed.

HARDWARE

IT'S STILL A POP-AND-SON TRADE—BUT LOOK AT THE EYE-CATCHING PACKAGING TODAY'S MERCHANDISING DEMANDS

In this era of chain organizations and group managements the American hardware dealer is in a curious economic position.

The great majority are independent operators and many of their stores are family affairs passed on from father to son.

Newcomers need considerably more capital to start than would be required for practically any other type of independent retail business on Main Street, but based on national averages, the hardware dealer has a considerably better chance of successful survival.

Reasons for the success of these thousands of individual enterprises are not hard to find. Total retail hardware sales for 1951 were close to 3 billion, an increase of 10% over the previous year.

There are thousands of hardware items that lend themselves to self-service selling and hardware stores almost universally have, to a large extent, adopted the merchandising methods so successful in chain-store operation. In fact, an increasing number of hardware stores are being operated on the same principles as the modern supermarket, using similar layouts and arrangement—even to the push cart, the check-out counter and large parking lots to accommodate customers.

Like the supermarket, too, the modern hardware store is extending its coverage far beyond what is tra-

2. ACETATE CARTRIDGES make screws an impulse item when they are merchandised in sets of six which the dealer puts in a handy kit to hang over work bench where they are ready for use at all times in the convenient re-use containers.

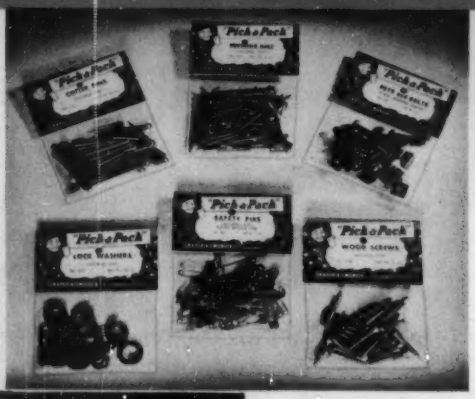
ditionally considered hardware—much of which is slow moving. The modern hardware store is virtually a department store with extensive houseware and appliance departments to attract women shoppers, gift novelties, sporting goods, photographic supplies, furniture, toys, etc. In fact, one authority designates as hardware "anything you can't eat."

In all this the package has become an indispensable selling tool and the packaging of hardware is falling rapidly into the pattern established for every other type of self-service outlet.

A large part of the credit for this progressive packaging development goes to the manufacturers and distributors of merchandise sold through hardware outlets. By their own necessity to increase sales, they have de-

Handy units

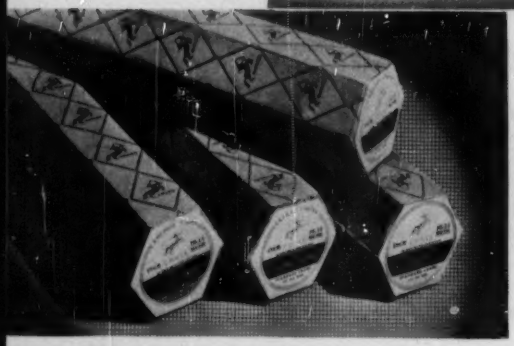
3. BRONZE weatherstrip in a quantity sufficient for just one door or window has made a hit in this transparent container, permitting examination of product and printed informative matter right on the paperboard base.



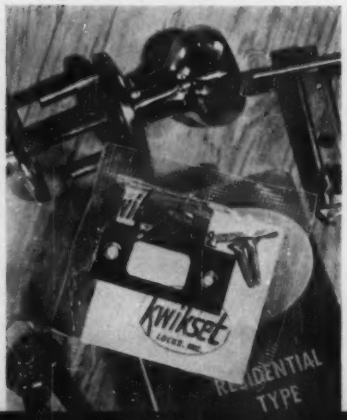
4. POPULAR quantities of "Pick-a-Pack" nails, washers, cotter pins, etc., in clear transparent bags hung on racks or displayed in the cartons in which they are packed will sell themselves.

6. CONVENIENT squares of sandpaper packaged in 10s are easy to buy from counter display.

7. THE "GO-WITH" problem of accessory hardware is solved by cellophane pouch that goes with Kwikset door-lock assembly.



5. TRADEMARKED octagonal package contains 100-ft. lengths of insect wire screening, providing a handy sales unit that takes Chase Copper & Brass brand name to consumer.



vised the kind of packaging that has helped hardware dealers to maintain their successful independence in the face of continually higher operating costs and growing competition from other types of outlets. Even supermarkets are entering the hardware market today; the National Tea Co. is reported to be testing hardware goods in some of its Midwestern stores, stocking items women use in the home and others that appeal to accompanying husbands.

The essential requirements of hardware packaging are:

1. Convenient selling units containing popular assortments and quantities of the hundreds of every-day items such as nuts, bolts, screws, nails, etc., so that the shopper may make a selection from organized self-service display without the aid of a clerk to sort, count or weigh out quantities before a sale can be made.

2. Packages that encourage the impulse purchase by their ability to sell the product in open display. Units which get the product on the counter in a minimum of space are the greatest need of the hardware dealer today.

3. Complete label information that describes a product and explains how to use it. There is little time today for the sales person to describe the merchandise.

4. Strong, colorful package design that will make "your" package stand out from the crowd. Hardware dealers are apt to feel there are too many brands and welcome the package that impels the shopper to buy.

5. Sturdy packages that withstand shopwear and protect the product.

6. Packages that discourage pilferage. This problem has become increasingly serious with the growth of self service.

The descriptions and illustrations of current examples of successful hardware packaging on the following pages point up the many ways in which manufacturers are meeting these packaging requirements for the hardware trade.

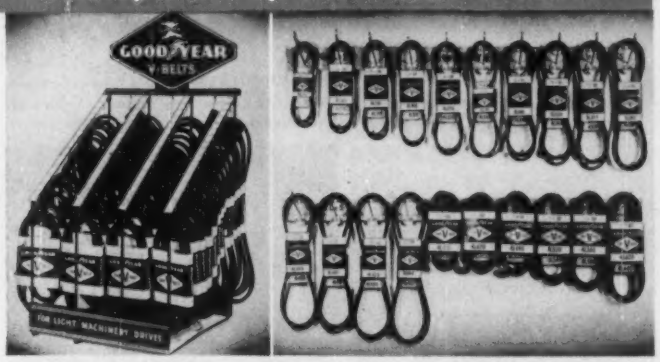
Convenient Units

The first important packaging step that emancipated the hardware store from the cracker-barrel era was development of the type of packaged unit that makes it easy to sell by self service the many hardware items formerly sold in bulk at great cost of sales time.

Nuts, bolts and screws, of course, are the classic examples, but there is continual progress in the forms of the packages and the fixtures for displaying them. Widely favored are the modern factory-sealed envelopes of transparent film, each containing a measured quantity of these hard-to-manage items. A particularly good example is the "Pick-a-Pack" line of nails, washers, screws, cotter pins, etc. This entire line is packaged in transparent bags, each containing a popular quantity and equipped with printed paperboard saddle labels giving brand name and essential product information. Each label is perforated with a hole so that the bags may be hung on racks. Contents of each are completely visible through the unprinted transparent packages so that the shopper can easily make his choice and take it to a clerk or check-out counter.

An interesting idea in merchandising screws is a clever little re-use tubular container made of extruded cellulose acetate with red acetate cap just recently adopted by the Eagle Lock Co., Terryville, Conn. The company is merchandising 10 each of 16 sizes of screws in these little cartridges in a self-service metal display rack, plus "Ever Handy" paperboard kits. The customer is encouraged by the copy on the display merchandiser to select six cartridges of the screws he prefers for a special price of 89 cents and get with them an Ever Handy kit suitable for hanging over a home workbench, where the six little plastic containers holding the screws will be

that speed up the sale



8. V-BELT DEPARTMENT is completely packaged by the Goodyear Tire & Rubber Co. A paperboard sleeve provides brand identity and detail of size and number. Belts may be displayed on hooks or in specially designed wire rack display.

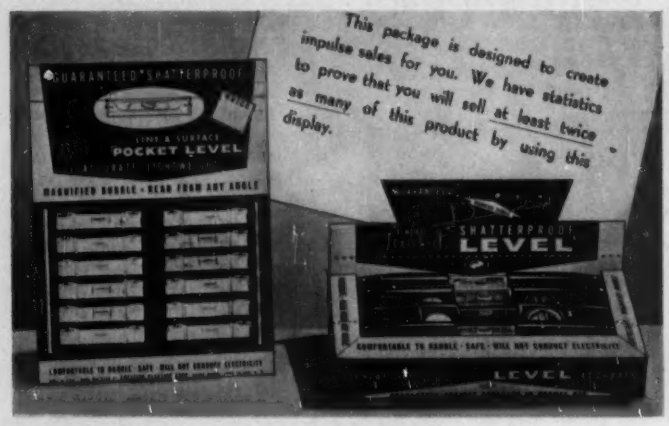
9. PACKAGED LENGTHS of garden hose identify Koroseal at point of sale, provide selling units that simplify dealer inventory and sales control.

10. DOUBLE HANKS of White Oak plastic clothesline in transparent display bag promote larger unit sale, permit customer examination.

11. EASY-TO-ASSEMBLE display gives E-Z paint rollers a place on the retailer's counter where they are seen by the many home owners who are now doing their own decorating. More than 55,000,000 of these rollers are expected to be used during the current year.

12. TRY-IT-YOURSELF demonstrator sells knife sharpeners stocked in factory pre-packs behind the counter. Customer may try sharpening the bread knife by turning on an electrical switch.

13. THESE DISPLAY PACKAGES sold levels two to one in comparison with the same products sold unpackaged. These tests brought forth a package insert carrying the promotional copy shown in the accompanying illustration.


This package is designed to create impulse sales for you. We have statistics to prove that you will sell at least twice as many of this product by using this display.
GUARANTEED "SHATTERPROOF"
POCKET LEVEL
MAGNIFIED BUBBLE - READ FROM ANY ANGLE
SHATTERPROOF
LEVEL

14. REVOLVING tool merchandiser with price-marked items reportedly produced up to eight turnovers yearly.

ready for use at all times. This new merchandising idea not only simplifies shopping, but makes a fast-moving impulse item out of screws, encouraging a six-unit sale.

Other dramatic new fixtures are helping the hardware dealer to sell small packaged items. Recently reported is a Nut and Bolt Bar, featuring a series of colorful, back-lighted transparencies which illustrate the principal types of bolts and nuts, together with the uses to which each is commonly put. This unit is designed for the average customer unfamiliar with trade terminology, enabling him to identify carriage bolts, lag screws, stove bolts, machine screws, etc., and select exactly the right type from the packages in the bins which accompany it. The unit has the further advantage of being a reminder to the shopper to make an ordinarily unplanned purchase.

This same kind of help-yourself technique is being applied to an increasingly larger list of products today in the hardware store. Goodyear Tire & Rubber Co. offers the hardware dealer a completely packaged V-belt department. The belt for each type of FHP drive is neatly packaged in a paperboard wrap-around sleeve which gives quick brand recognition and complete detail as to size and number. The belts are supplied to the

15. MOLDED PULP wheelbarrow in miniature, finished in four colors, by interesting novelty attracts attention to these Trump garden tools.

16. UNIVERSALLY effective is the counter display carton to stimulate unplanned purchases, such as Royal's Shok-Absorber electric fuses.

dealer complete with wall rack hooks or table racks—all neatly arranged for proper selection of the belts by numbers. The customer simply picks the one he needs.

Sandpaper used to be sold in bulk in large sheets or cut from rolls. Now the shopper buys it in handy pre-cut squares, neatly banded and placed in display cartons. Examples are Carborundum Co.'s Handy Sandy assortments which the dealer can put right on the counter in pre-packaged units displayed in counter cartons.

The transparent heat-sealed envelope has also been a boon to the packaging of accessory hardware items. Kwikset Locks, Inc., uses a sealed cellophane bag for the hardware parts required for mounting a door lock. In this way the customer can see at a glance whether all the items are included with the product and the printed cellophane bag gives brand identification.

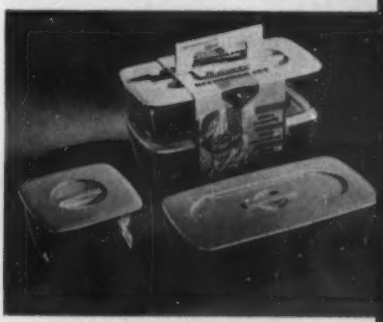
An efficient use of a rigid plastic container is the round telescope-style transparent acetate box used by W. J. Dennis & Co. for 20-ft. coils of bronze weatherstrip—a quantity sufficient for one door or window. The package permits examination of product without opening and has strong merchandising appeal. A paperboard base, printed in orange and black on both sides, supplies illustrated instructions as well as sales copy. Each 20-ft. coil is packed with an envelope containing nails and a metal punch to facilitate application.

Chase Brass & Copper Co. makes it easy to sell 100-ft. lengths of bronze insect-wire screening in octagonal cartons convenient to handle and beautifully printed to bring brand identity right to the end user.

Among the most colorful package displays in the hardware store today are the conveniently packaged lengths of garden hose. B. F. Goodrich most effectively promotes its Koroseal hose by taping a printed trademarked disk to each wound length. This not only provides a unit which the consumer has learned to recognize through the strong advertising support of the Koroseal brand, but one which simplifies dealer inventory control and bookkeeping. By selling in units instead of footage, he at all times has an accurate account of sale.

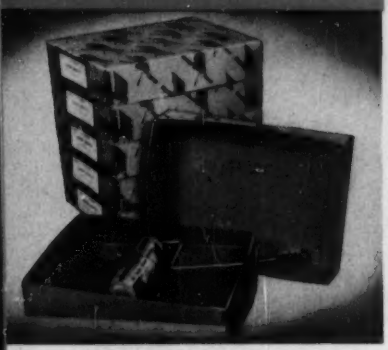
Brand identity

Strong eye appeal and quick recognition are two of the most important factors in the selling of countless products in the hardware store. With an ever-growing number of brands in paints, household and farm chemicals, fertilizers, seeds, insecticides, etc., it is increasingly more difficult to devise a package that will stand out from its competition. Yet this problem must be solved by every manufacturer and demands the services of experienced designers. Store operators favor packages like the new can for Krilium soil conditioner which tells the story by illustration on the package. They like packages like Northrup, King & Co.'s carton for Golf brand lawn seed, planned with these four aims in mind: (1) emphasis of brand and company

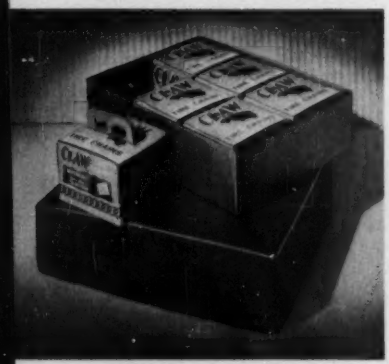


17. LABELING must describe product and its uses. Federal Tool Corp.'s Carry-Home Pack illustrates compact stacking features of three refrigerator dishes.

18. APPETITE APPEAL is used on these attention-getting full-color labels for the West Bend Aluminum Co.'s baking pans and cookie sheets.



19. SLANTED PAINT TRAY, very practical for roller painting, may be made of the base of metal-edged telescope box used as the package for Wooster De Luxe Roll-On Painter. Heavy kraft board is treated to resist the effects of paint solvents.



20. CARRY-HOME carton for Claw tire chains is a perfect solution for storing chains in trunk of car or in the garage when not in use.

name, (2) lively eye appeal, (3) family recognition with other Northrup, King packages and (4) full information about the product. The new Golf package has red lettering combined with green and reverse white. It is simple enough to be reproduced in black and white so that it never loses its identity in printed advertising or over television. It is given the best possible point-of-sale aids.

Organized display

Hand in hand with the principle of brand recognition is the element of display that is required—the ability to dramatize the product at the point of sale. In the hardware field, this often means a packaged display deal to stimulate the unplanned purchase.

An excellent example is the miniature molded-pulp wheelbarrow display which the Animal Trap Co. has devised to set off its Trump garden tools—cultivator, trowel, weed cutter, fork, etc. The display is finished in four colors with raised letters and the tools fit in slots as realistically as though they were casually thrust in a load of soft earth. This novelty appeal of the unit is a boost to sales.

The colorful blue, white and yellow revolving merchandisers used by P. & C. Hand Forged Tool Co., Portland, Ore., now used in more than 6,000 outlets, are striking examples of efficient presentation of individual items for convenient selection at the point of sale. The Thrifty-50 holds 50 of the most popular hand tools, while the Rocket-150 holds 150 of the most wanted tools. A flashing light in the plastic beacon top draws customers to the merchandiser. All the shopper has to do is turn the merchandiser around until he finds the type and size of tool he wants, lift it off a hook and hand it over the counter for purchase. Each item is clearly price marked. Dealers report as high as eight turnovers a year with these popular tool-selling units.

Stanley Tools, New Britain, Conn., is offering permanent units to dealers with a stock of tools. The units are designed to provide a complete tool department in a minimum of space and, of course, get the company name permanently before the shoppers.

How display packaging can speed up sales is illustrated by two units for Level-It levels, manufactured by Creative Plastics Corp., Stony Brook, N.Y. A counter carton and an easel unit were designed to call attention to new selling features of these levels—magnified bubbles, non-conductivity and shatterproofness. In tests to prove the effectiveness of the packaging versus the same products unpackaged, the company found that the Level-Its were selling two to one over non-packaged levels. This test, repeated in several outlets with the same result, brought forth a package insert for the dealer: "This package is designed to create impulse sales for you. We have statistics to prove that you will sell *at least twice as many* of this product by using this display."

Also most effective in the hardware store are the try-it-yourself displays. The hardware-store shopper is most frequently gadget-minded and likes to see how things work. An example is a small pyramid of green paperboard, surmounted with an electric knife sharpener made by the John Oster Mfg. Co., Racine, Wis. A bread knife attached to a chain permits the customer to try the sharpener by turning a switch. This device was reported most effective in promoting the sale of this item, which can be sold from stock pre-packs kept behind the counter, thus saving valuable display space.

In housewares lines there is an increasing need for display of sample units in small space to sell the many types of kitchen tools and appliances which practically all arrive at the retail store in factory pre-packs that can be sold from stock without repackaging. Landers, Frary & Clark was recently complimented by the National Retail Hardware Assn. for its metal-and-wood aisle display showing seven different models of Universal food and meat choppers in 23 in. of space. The chopper clamps are all inside the square to protect choppers and customers, and a special platform features exclusive selling points of the "Swing-A-Part Choppers." No packaged stock is shown, but the customer receives a factory-packed unit from stock.

And, of course, the well-designed counter carton for the display of small packaged items is universally used in hardware merchandising. How this helps to bring to the attention of the shopper many items he would not ordinarily see is illustrated by the Royal Electric Co.'s Shok Absorber fuse units. These items have only recently been merchandised for home use, suggested to absorb temporary current overloads when starting motors on appliances and thus protect against dangerous overloads and short circuits. Naturally, the company had to call attention to these home uses. Counter cartons have been used to point out *what* the fuses are for, while individual cartons tell *how* to use them. Handy five-pack boxes are included in a second counter unit to promote multiple-unit sales.

Informative labeling

Many items in the hardware store sell themselves because of the good job the package does in telling the sales story. Such is the case of Federal Tool Corp.'s Carry-Home Pack of Refrigerator Refresher Dishes. The

packaging consists of a die-cut sleeve with carrying handle which fits snugly to hold one large and two small covered refrigerator dishes. The printed illustrations on the package show how the dishes stack compactly and store between the shelves of any refrigerator—a feature every woman welcomes in dishes of this type.

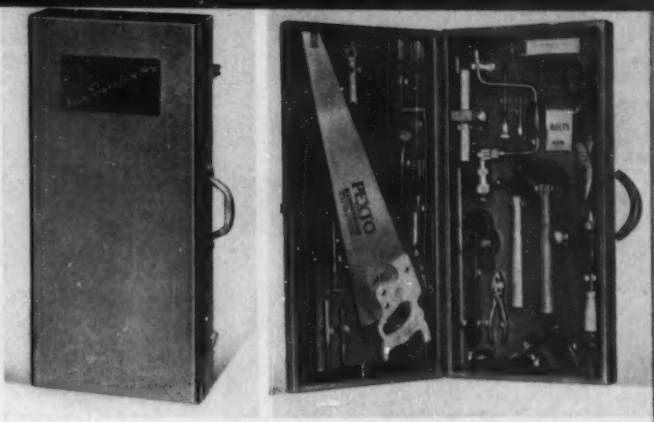
West Bend Aluminum Co., West Bend, Wis., has devised a most unusual way to use full-color, appetite-appeal labels to attract attention to its chrome stainless steel pie pans, cake pans and cookie sheets, plus getting brand name displayed prominently. Each label carries a mouth-watering illustration of an item that can be baked in each pan, together with recipes about how to do it, as well as sales copy on exclusive features, such as "distinctive juice-catching rim," "bakes evenly," "cleans easily," or "won't stick." The food illustrations quickly attract the eye and serve as a reminder to the shopper that she needs new cake pans or cookie sheets.

Gift packaging

The increasing number of women shoppers in hardware stores through the installation of housewares departments and the growth of hobby markets are making hardware dealers more keenly aware of the opportunity for capitalizing on gift purchases. And there are many interesting possibilities for the manufacturer to use gift packaging for these additional sales.

One of the cleverest gift-packaging promotions is that of Peck, Stow & Wilcox Co., Southington, Conn. This firm first merchandised a complete kit of the most commonly used household tools in a handsome metal case called "Personalized Signature Outfit." Along with this went a card for the recipient to fill out to receive a personalized metal nameplate with his signature transcribed on it to be affixed to the metal kit. The success of this gift idea inspired another, called "Mother's Own," which is a special set of tools for the lady of the house, all neatly contained in the pockets of a vinyl case with corner grommets ready to hang up in a handy location or over a workbench. The tools are finished in pleasingly feminine colors of green and buff, and the assortment and wall-hanging case are neatly packaged in an attractive set-up box with paperboard easel base for stand-

(*This article continued on page 202*)



21. PERSONALIZED tool kit of metal is merchandised by Peck, Stow & Wilcox. The name plate is inscribed with recipient's own signature.

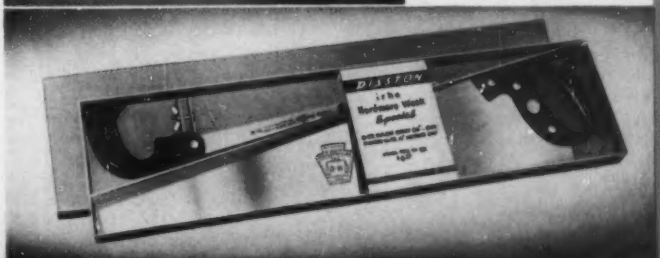
Plenty of opportunity for gift packaging

22. MOTHER'S OWN set of tools gift packaged for lady of the house is also smart promotion of Peck, Stow & Wilcox. Tools fit in vinyl case. Acetate-covered set-up box has an easeled back for display on counter.

23. GARDEN CLIPPERS packaged in window box by Wiss with gloves and book on "How to Prune" are successful gift item.

24. GIFT WRAPPERS for special occasions are supplied to dealers with Utica set of three wrenches in set-up box with transparent acetate cover. These aids provide seasonal interest.

25. BOXED SAWS as a Hardware Week special suggest another idea for promoting a gift set and a combination sale.



FIRST to undergo new label change were jellies. Note how new keystone symbol replacing die-cut shape continues famous identity, but permits full-color product illustration impossible on old label.

NEW BAND LABEL placed high on pickle jar permits product visibility, making illustration unnecessary. Red and green on yellow background provide tangy colors that suggest pickle products. Clean-cut design is possible by placing mandatory data on another part of the band.

HEINZ 57 STEPS OUT

IN SWEEPING LABEL REDESIGN, TUNED TO MODERN FOOD SELLING, SOME OF WORLD'S MOST FAMOUS TRADEMARKS ARE JUGGLED BUT NOT DROPPED

Few redesign programs could be more significant of changing trends in canned-food merchandising than the complete relabeling program of the H. J. Heinz Co., now nearing completion after more than two years of study.

The famous keystone-shaped label, the pickle illustration and the "57 Varieties" slogan have ranked among the most famous trademarks in all packaging and have built up a reputation for quality that is probably unsurpassed in creating acceptance for glassed and tinned processed foods. The line more than two years ago was accorded a place in MODERN PACKAGING'S *Packaging's Hall of Fame.**

Now, for the first time, the die-cut, keystone-shaped labels that have scored almost 100% recognition in numerous consumer tests of blank trademark shapes, have been replaced by a new, more flexible keystone device in the form of a line drawing—a smaller but bolder symbol of a keystone so simple and direct it can be recognized no matter how it is reproduced. This symbol can be reproduced in any size, in any color and in any desired spot on a package or other promotional material.

By this move Heinz is emancipated from the design limitations of confining all label information to the inside shape of the old die-cut keystone label. The new keystone may be printed in any selected position on the label, as a distinct element, giving instant Heinz identity. But the designer is free to use the rest of the label space in any way he sees fit to give greater emphasis to product designations and to product illustration so essential in today's merchandising.

If the product needs a full-color illustration—as in the case of jellies—then the keystone may be reproduced in a suitable size and in a position to share honors with the illustration—yet retain the instant recognition of a Heinz product. In the case of soups, where product illustration is not believed necessary, the new keystone permits the use of a large area for bold lettering of the names of soups so that the shopper can make no mistake in selection.

It is significant that the product illustration on the jellies marks the first definite step in that direction by Heinz, which, although it has recently tested illustration in various ways, has never before adopted it as company policy. Previously it had been

*See "Heinz 57 Varieties," MODERN PACKAGING, Feb., 1930, cover and p. 88.

RED BACKGROUND has been retained for soups with new keystone symbol in blue, placed to give better area for display of soup designations. Famous number "57" stands out in keystone, where it has a permanent place.

felt that illustration would interfere with the primary objective of brand identity—but the new designs prove otherwise.

The pickle has been dropped from many of the labels, or moved to the cap on such products as ketchup, vinegar, chili sauce and mustard where it logically suggests the purchase of a condiment.

And the "57," which is one of the most famous numbers in industry, has been placed prominently on the new keystone device where it now has a permanent location on every package.

Such changes are not made lightly by a company that produces a billion packages of foods a year worth more than $175,000,000 and whose "Heinz 57 Varieties" are household words in 200 countries and territories.

A redesign program too hastily conceived and approved, company officials felt, might have endangered many of the label features which Heinz has painstakingly built up since 1869, when Henry J. Heinz started a packaging trend of his own with the marketing of his home-made horseradish—the first of the 57 Varieties—in clear, glass bottles.

Not many companies, however, when they embark upon a complete program of label redesign, are in the fortunate position of having too much of too many good things.

The H. J. Heinz Co. realized immediately that the problem of *what* to emphasize in a projected label-redesign program was going to be just as important as the question of *how* to emphasize.

There were questions of how to handle the following well-established points of identification:

First, the name Heinz itself.

Second, the ubiquitous pickle, which has been distributed—in the form of a pin—to thousands of persons who tour the main factory at Pittsburgh and which was always present as an illustration on the old Heinz label.

Third, the Heinz keystone, which served as a border for the Heinz name itself and the name of the variety covered by the label.

Fourth, the phrase "one of the 57 varieties."

Fifth, a conservative "feeling" on all labels that was tied in with the quality Heinz has never ceased to merchandise.

Finally, there were secondary points of identification, such as the listing of the company's principal factory locations, the "registered U. S. patent office" phrase and the "Est. 1869," which had appeared on the Heinz labels for so long a time that no one with certainty knew how strongly they registered or failed to register with the average consumer.

Above all these tools of labeling stood one important fact—that this same average consumer was paying as much attention to the outside of a package as she did to the inside. Supermarket shopping habits carried into independent groceries had made it imperative, all Heinz officials agreed, that a new label series—carefully considered and prepared—was necessary to keep pace with a steady company streamlining of sales technique, sales promotion and advertising. The only "must" insisted upon by H. J. Heinz, II, president, was that the final label for any of the 57 must reflect fairly the tradition of quality that is also the steady tradition of the house.

On this basis, the company's sales, advertising and product development departments went to work.

This group decided that three factors must be weighed before the adoption of any label design: (1) the house name, Heinz, must show up well on the package, (2) the specific variety should be well emphasized and (3) the general attractiveness should be such that the shopper would be willing to reach for it on the shelf.

One point of decision was reached after a market test. Two different labels, one emphasizing the "57" more strongly than the word "Heinz" was made up and affixed to several thousand food packages; the second reversed the procedure by highlighting the company name over the numerals that Heinz, with some justification, regards as the most famous number in industry.

Other than this single switch, both

COMPLICATED PROBLEM of label redesign is indicated by photographs of new (left) and some of the older 57 varieties. Objectives of change-over were: (1) strong identity for Heinz name, (2) strong emphasis of product name, (3) attractiveness.

packages were identical in size and label.

"We lived with this dual-package program just long enough to be very sure that the name Heinz sold more than the number 57," says F. C. Majorack, manager of product development.

With the value of the name, from a labeling standpoint, soundly reestablished by actual market test, the keystone trademark was next thrown into the spotlight. Various design experiments were made. The former fancy supplemental borders were trimmed away. Artists began to foreshorten the symbol, elongate it, telescope it. Very quickly, Heinz found out that while the keystone may represent the foundation stone of an enterprise, it takes little tinkering before it begins to lose its identity as a keystone.

The decision: keep the keystone simple and keep it small, but retain its original design.

In working on the design of the keystone, the researchers at Heinz made another finding. The word Heinz, which had traditionally followed the upper arch of the keystone, did not look right when it was typeset into a straight line. This was noted even when the word was placed on the flat, rectangular face of the precooked-cereal boxes. So the curve remains.

The long-remembered pickle was taken off many of the labels for products where it had no significance, but its value as an identifying illustrative mark has been strengthened by using it on the caps where it can help to suggest to the housewife a purchase of Heinz condiments.

In starting out on the program, the company selected its 10 fruit jellies for the number-one spot. It was decided that these varieties would best receive rapid product identification through pictures of the various fruits which could be quickly identified by the shopper. In this case, the illustration was more important than the color, since several of the Heinz jellies are a natural and virtually similar shade of red. Heinz jelly sales are up and have been up since the new label was adopted for the line and, for this particular product line, the Heinz company is well satisfied to have an attractive color picture tell the story of what lies under the jar caps.

Pickles were a different story. Heinz is the world's leading producer of pickles and, for the first time in Heinz history, the pickles now have a common label—from the famous little sweet gherkins (which, the company suspects, will continue to sell just as fast under a new label as they have always done in the past) to such a relatively new variety as Heinz Processed Dills, whose national sales in the past few years have far exceeded company expectations.

The Heinz company, being extremely proud of the color, quality and taste of its pickles, is now using a banded label, placed well up on the jar so that the contents of the jar can be seen and examined with ease by the shopper. No picture of pickles is needed—the pickles themselves tell the story to the shopper, so the company reasons.

In working with color, Heinz people reached agreement on three general factors that deserved equal attention in settling on a given color for a given variety label. It was recognized that the consumer has a certain familiarity with a color a company may have been using on a given product label. Second, a suggestive color also merits attention—a color that suggests the product in the can or jar. Third, there could always be the possibility of arbitrarily choosing a good color that was entirely divorced of company tradition or product suggestion—in short, a color that simply "looked right" for a given product. All three of these factors are represented in the present Heinz program.

For example, the traditional company color for its soup label—red—proved to have been so well established over the years that any change would have been undesirable or even dangerous from a sales standpoint. Yet on grape jelly, purple was logically a good "suggestive" color and was accepted for this particular Heinz product. In another manner, general consensus was reached without difficulty on yellow and red for the pickle-line label, and maroon and yellow for the company's new line of individual-serving-size stews for its national hotel and restaurant trade. These colors, apparently, "look right" and together with the other brand-established and selected colors give the Heinz family wider color interest for mass display than was ever possible with the old labels.

Baby food dictated a special requirement insofar as label design was concerned. The company answered requirements on its big baby-food line by a good, strong-looking label that has the specific product identification well established by large type—a time-saving aid to parents on the hunt for various varieties in a food line where identification is much more difficult than with food packed in larger-size tins or glass containers.

Two different colors, not yet announced, will distinguish Heinz strained and junior foods. The same distinctive baby on both label groups—looking a little more grown

(*This article continued on page 214*)

Half a century of "57" designing

IN 1905 as now, package and label design were an essential to the over-all merchandising program of the H. J. Heinz Co., as shown by this old photograph of one of the Heinz artists at work.

THE POTTED PALM has disappeared from the company's design studio, where most of the creative work on the new labels was done, but the principles of continuing study go on. Photo above shows Marguerite Steck at work on today's program.

Plug-lid tobacco tin

NEW TOP CONSTRUCTION GIVES TIGHTER FORCE FIT WITH EASIER OPENING AND ELIMINATES ALL RAW EDGES THAT MIGHT TEAR THE FINGERS

The American Tobacco Co. is now packaging its popular Half and Half pipe tobacco in an improved pocket-style can which features a double-surfaced, hinged, plug-type lid, seating inside the can, in place of the customary single lid with outside friction fit. Advantages claimed for the new can's closure are a tighter seal, both initially and during the period of the customer's use, freedom from sharp edges and easier opening. It was designed especially for American Tobacco.

The new can lid uses a 5/16-in. deep metal plug topped with a second flat piece of metal having a projecting rolled-edge flange which seats against the rim of the can when the lid is closed. Plug surfaces seat against a ¼-in. inside turndown of the can body, except in the case of the ⅝-in. section of the turndown where this metal is rolled outward to form the outside pin-hinge attachment. The outer can body metal is pressed in at this point to give continuity to the seating surface. The cap thus gives a snug friction fit at both top and side. Opening is effected at the front edge by simply pushing upon the slightly projecting lid flange. With all edges of both can body and lid rolled, there is no raw edge of metal at any point to scratch or cut the fingers.

The American Tobacco Co. points out that a readily resealable closure is particularly important in this type of tobacco container which may be opened and reclosed many times. A seal which is not substantially moistureproof allows loss of the tobacco's moisture and volatile flavor elements so that taste is impaired and accelerated burning makes pipe and smoke unpleasantly hot.

At wholesale and retail levels only a portion of the pipe tobacco is held under humidification and as the product does not move as rapidly through trade channels as cigarettes, the keeping qualities or shelf life of tobacco in an airtight can are important, too. The tobacco is shipped in counter display cartons of one dozen cans; shipments in the new "Seal-Tite" cans are without the cellophane can overwrap formerly used, eliminating what the company considered ". . . the anomaly of overwrapping a tin can."

OPEN OR SHUT, the new Half and Half can presents smooth contours and positive action that assure the smoker of satisfaction. The hinged, double-double-surfaced lid will drop flat against the back of the can.

When open, the new-style lid lies flat against the back of the can—a convenience to the smoker filling his pipe.

A card inserted in each carton of the new cans, addressed to dealers, enumerates the advantages as follows:

"New super-tight seal keeps the tobacco fresh—assures the smoker of fine flavor from the first to the last pipeful!

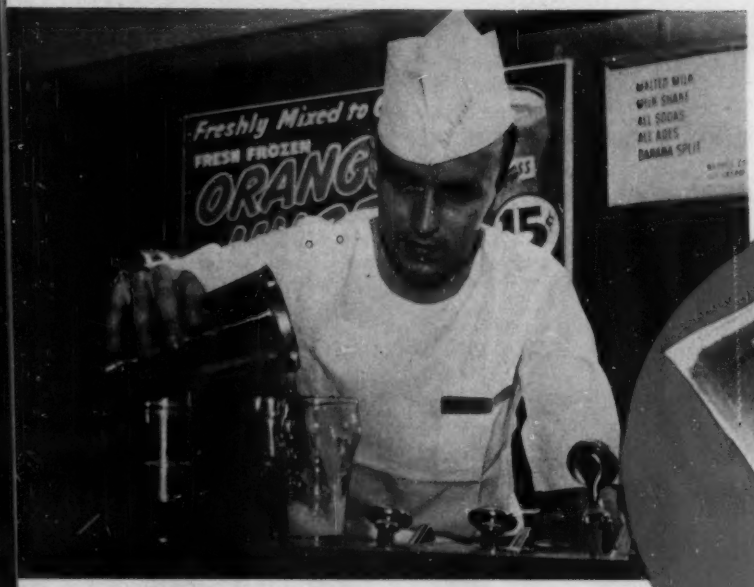
"Eliminates all sharp edges—no more nicked fingers!

"A more compact package—easy to open—takes a flick of the finger!"

As previously, a waxed-paper cup, folded but not sealed, encloses the tobacco in the new can. This is necessary for the portioning, weighing and can-filling operation, and it provides an additional safeguard to the tobacco's moisture content before and after the can is opened.

Except for the "Open here—push up" instructions, there has been no change in the external lithographed design, which retains the same green-and-black, diagonally split design, with highlights of red, cream and white.

CREDIT: *Can, Continental Can Co., 100 E. 42 St., New York 17.*



A FEW SECONDS from the customer's order to the pouring out of a 10-oz. glass is all the time it takes a Walgreen fountain employee to reconstitute fresh-frozen orange juice supplied in the new individual-serving film bags. Squeezing the juice used to take nearly three minutes.

FOUR-SEAL PACKAGE in which the concentrate is frozen is made of laminated cellophane and polyethylene film. Printing on cellophane is between the films. Package measures 2¾ in. wide by 5½ in. long, holds 2½ oz. of concentrate, which reconstitutes to make a 10-oz. glass of juice.

Orange juice in a bag

FLORIDA PRODUCER'S REVOLUTIONARY PACKAGE FOR SINGLE FOUNTAIN SERVINGS OF FROZEN CONCENTRATE IS SKYROCKETING WALGREEN'S SALES

Packaging technology has become a powerful tool in the hands of the skillful merchandiser. Today the merchandising expert often may allow his creative imagination free rein, with good hope that a package supplier will be able to reach into his bag of new tricks and find something that will make the dream a reality.

An unusually clean-cut example of the way a package can be tailored to the measure of a merchandising-man's wants exists in the form of Walgreen's new single-service bag for fresh-frozen orange-juice concentrate, now in use at most of the drug-store chain's fountains. The bag is a printed cellophane-polyethylene combination produced, filled and sealed automatically on equipment specially adapted to this revolutionary new packaging development. Each 2¾-oz. bag reconstitutes into a 10-oz. serving of orange juice.

The story began last winter, in the Chicago office of R. G. Schmitt, vice president of Walgreen Drug Stores. Two executives of Pasco Packing Co., Dade City, Fla., were offering suggestions on possible ways to speed up and improve service of orange juice at Walgreen's fountains. The men from Pasco were E. H. Fehlberg, the company's research director, and J. H. Bickerstaff, merchandising manager. Pasco, one of the four leading producers of citrus frozen concentrate, supplies many major retailing and distributing organizations with concentrate under a wide variety of packer's and custom labels.

One of a number of suggestions appealed to Mr. Schmitt—he saw possibilities in a single-service pack, in film, if the packer could work out the technical problems. The Pasco men accepted this challenge.

Both firms had a keen interest in the proposed idea. In the fountain restaurants which are such an outstanding feature of its modern "super" drug stores, Walgreen has for many years stressed the fresh juice squeezed-to-order as an attraction to

vitamin- and flavor-conscious customers. In 1951 the chain's 400 fountains served between 12 and 13 million 6-oz. glasses of fresh-squeezed juice. This juice commands a good price (Walgreen charges 15 cents for a 6-oz. glass), but the item had been something less than ideal from the point of fountain efficiency. Squeezing oranges for one glass of juice takes an average of 2.8 minutes—awfully slow work at a busy fountain. What's more, fountain employees unconsciously tend to avoid the lengthy job. On top of this problem there is the cost of disposing of the skins—it costs 50 cents just to get the skins from three crates of oranges hauled out of the store. Fresh oranges are also subject to seasonal variations in cost, flavor and color of the juice.

Efforts to overcome some of these problems led Walgreen to experiment with elaborate and expensive mechanical automatic squeezers, but these still did not eliminate waste disposal. Furthermore, machine maintenance, especially cleaning, became just one more chore loaded onto fountain personnel. At one time, fresh-frozen-juice display dispensers, a familiar sight at many fountains, had seemed a solution to some fountain operators, but not Walgreen's since these refrigerated agitators are expensive and also require strict cleaning and measuring procedures. Also customers who see the juice on display can't tell how long it has stood exposed to air in the dispenser and regard it as something less than fresh-squeezed juice.

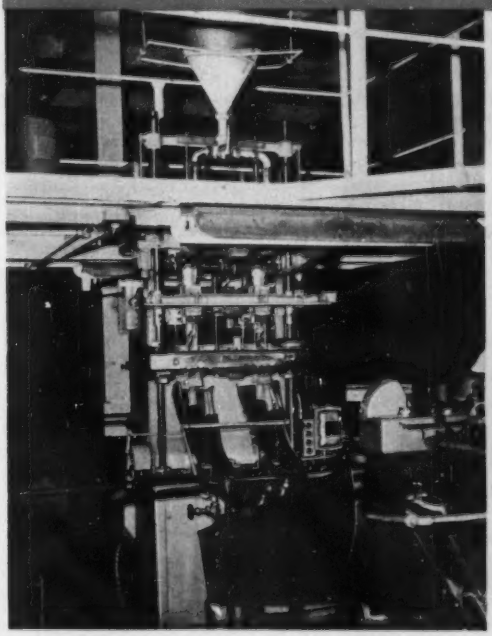
Pasco's interest was that of any citrus firm—enthusiasm for a development which promised to broaden the market for fresh-frozen concentrate and thus help to maintain the hard-won stability of the citrus industry and promote its healthy growth. A major citrus customer and a packer thus had much to gain if the idea could be translated into reality.

Pasco's first move was to make simple tests. First tried were semifabricated bags of polyethylene film, which were hand filled and heat sealed. These failed as a practical solution. It was so difficult to get an effective seal on the plain film that "leakers" were many and the film's permeability to oxygen promised short storage life to oxygen-sensitive citrus. When a system of squeezing the semisolid juice from the bags at the fountain was worked out, it was found that often all seams would burst, spraying orange concentrate in all directions.

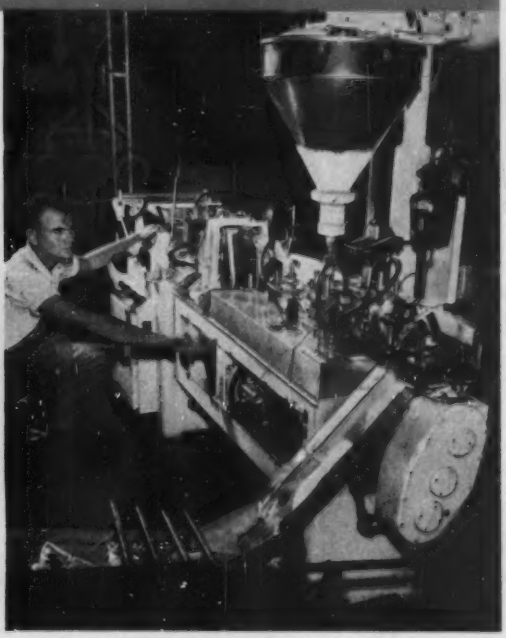
Nevertheless, Walgreen was provided with enough of the experimental bags for a few in-store test promotions and, in spite of the shortcomings of the bags, a strong sales potential was demonstrated.

By February, Pasco and Walgreen had satisfied themselves that the idea was worth following and sought skilled technical help. They enlisted the cooperation of a supplier who had accumulated much experience in producing flexible packages for the

Two types of machines are used



A HUNDRED PER MINUTE of the sealed packages come off this machine at Pasco's Dade City, Fla., plant. Machine forms bags from roll, fills and seals in one automatic operation. Filled packages are sprayed in inclined trough (foreground) to remove juice spilled in filling operation.



FIRST MACHINE to be installed was this one, the manufacturer's standard unit, used as a pilot model to determine modifications needed. Special units later supplied by both manufacturers are equipped to withstand acid, frosting and steam hosing for sanitation and defrosting.

BAGS EMERGE from freezing tunnel at hand case-loading station. Hand packing into compartmented corrugated cases follows freezing. Filled cases holding 72 packets of juice are rushed into below-zero storage rooms.

vacuum packaging of meats, cheese and other foods and had done considerable pioneering work on packaging liquids in the newer plastic films.

This firm's first job was to enumerate the requirements of the single-service orange-juice package on the basis of Pasco's and Walgreen's initial investigations. A suitable package would have to be:

1. Transparent
2. Waterproof
3. An oxygen barrier
4. Strong
5. Flexible at low temperatures
6. Capable of mechanical sealing
7. Machinable (adaptable to existing automatic packaging machinery)
8. Printable
9. Priced within limits

In its work on vacuum packaging, the supplier had worked closely with a leading producer of refined and purified gases and had thereby accumulated precise data on the barrier qualities of at least 50 different materials and laminated combinations, principally transparent. Much private data was also available within the company on the subject of liquid packaging in films. These basic records provided the answer.

The supplier selected an anchored-type cellophane laminated to a 0.002-in. polyethylene film, joined by a special resinous adhesive developed to resist delamination at very low temperatures. The polyethylene was chosen for its cold-temperature flexibility, strong heat-sealing potential, general strength and low level of moisture transmission. The latter was essential to keep dehydration to a minimum and to retain the concentrate if refrigeration should fail in shipment. Cellophane was selected for its transparency, printability and good machining qualities. Perhaps most valuable is cellophane's oxygen-barrier property—citrus products deteriorate rapidly in flavor and quality if permitted to oxidize.

In a laminated combination cellophane adds immeasurably to machinability by virtue of its rigidity and no-stretch qualities. It supplies an outer surface that readily transmits sealer heat to the polyethylene lining, but releases from the heating elements without sticking. Thus protected, the polyethylene provides an efficient seal. By reverse printing on the cellophane before lamination, the printed surface can be sandwiched between films, protected from juice and scuffing alike.

This laminated combination, although selected for the specific needs of the job, was not much different from some of the film combinations successfully in use for refrigerated-food packaging. Performance tests had to prove, however, that the chosen material would hold up when subjected to the 40-below-zero temperature of the freezing chamber where the juice, filled in semifrozen "slush" form, would be frozen solid. When hand-filled samples took this extreme abuse plus all required shipping and accelerated storage test, the cellophane-polyethylene combination was approved.

Although previous experience with machine handling of this type of film combination in the forming-filling-sealing of bags for liquid or viscous products had been successful, Pasco, the film supplier and the machinery manufacturers all realized that filling slush-frozen citrus was likely to prove a more rugged assignment than usual. Of three manufacturers with machines thought capable of handling the assignment, two have supplied units.

One of the machines, virtually a stock unit, was rushed into operation as a pilot machine on April 10, approximately four months after the date of Mr. Schmitt's original challenge to Pasco in Chicago last winter. Tests and the working out of installation bugs required until mid-May. By that time a machine of another manufacturer had also arrived and, with its installation, production reached what is described as "almost commercial scale." Production climbed steadily as wrinkles were ironed out and in June distribution to a number of Walgreen fountains was under way. In August production had reached a steady 100,000 of the 2¾-oz. packages a day per machine, using one machine of each of the manufacturers represented. The lines operate on a 24-hr., three-shift schedule, with one attendant for each machine.

According to Pasco, the first machine supplied as an experimental pilot model was still operating successfully in August, but was at that time scheduled to be supplemented by a modified unit built specially for the job by the same company. The other machine in use is a job-modified version of one first shown at the Packaging Exposition in Atlantic City last April, where it was in operation putting up samples of hand lotion in a four-seal package of flexible film. Pasco reports that all interested machine manufacturers had the opportunity to study the pilot production line to familiarize themselves with the inherent difficulties of handling the product.

Adapation of these machines to the packaging of citrus concentrate includes, of course, the provision of non-corroding or plated parts wherever the citrus juice may come in contact with machine parts. Thorough steam cleaning of the machines is a recurrent necessity for sanitation and defrosting, so all mechanical and electrical parts must be sealed and made waterproof against the searching steam hose. The fact that the concentrate is fed into the hopper at 17 deg. F. and chills the machine parts causes a considerable condensate problem in addition to the frosting. Drip-catch pans, cups and channels are thus a necessity to divert the flow of water. Other ideas, gained from pilot operation, include a remote panel location for electrical controls, improved lubrication systems and special sealing elements and sealer-temperature controls. Chilling

to 17 deg. F. also has some tendency to embrittle ordinary machine parts, it was discovered.

Pasco plans a thorough trial of the modified versions of both machines in continuous commercial production, after which, the company says, it will purchase additional units.

Neither Pasco, Walgreen, the materials supplier nor the machine manufacturers consider this present operation to be perfection. A further possible development is the filling of the head space in the flexible packages with nitrogen or another inert gas to eliminate oxygen in the package and thus theoretically improve storage. The possibility that this might be needed was foreseen by the package-material supplier, who made certain that the film would retain nitrogen, and by the machine designers, who have included provision for head-space gassing in the filling mechanisms. At present, quick turnover of filled packages, plus the fact that the head space in the bags is minute, has made this refinement unnecessary. Precise tests of flavor and vitamin loss in long storage will be needed to determine whether gas filling is necessary at all.

Another field for improvement will probably be in the field of shipping containers and automatic packing. Mechanizing of this step is a particularly knotty problem because the film bags leaving the filling machines should, ideally, be frozen and placed in cold holding rooms without delay. This means that, ideally, the automatic case-loading equipment itself should be located in a cold-chamber. However, the 40-below-zero temperature of the freezing tunnel and the below-zero cold rooms provide such extreme operating conditions for machinery and materials that no one has as yet taken up this particular challenge. At present, filled packages are conveyed directly from the machines and through a freezing tunnel, then emerge through a self-sealing slot into an unrefrigerated packing room where hand packers load them into cases. As soon as cases are filled, they are moved into cold storage rooms.

Currently, Pasco is shipping the juice to Walgreen in compartmented corrugated boxes holding 72 2½-oz. bags, each of which makes a 10 oz. glass of juice when reconstituted. The juice is held at zero deg. F. or below until the cases are delivered (*This article continued on page 214*)

SERVING CONTENTS AT THE FOUNTAIN

A KNIFE CUT across the face of the bag opens it at the fountain, where slit bag is put into automatic extraction-mixing machine at employee's left. Compartmented case holding 72 individual servings of juice, shown out for photo, is in practice kept at about 8 deg. F. in the fountain's ice-cream compartment.

INTO EXTRACTOR goes the cut-open bag, folded open to allow extractor plunger to squeeze out the semi-solid frozen concentrate. Plunger is then raised to allow for removal of empty bag.

AUTOMATIC MIXING follows in machine which, with the push of a button, meters in water to make a 10-oz. glassful, then mixes and aerates for six seconds and finally shuts itself off.

'Good Taste' in plastics

JOHN WAGNER & SONS USE MOLDED CANISTER WITH SIFT OR POUR TOP FOR NEW SEASONING

SLEEK DESIGN and pleasant feel of molded red and white plastic shaker wins new all-purpose seasoning a place on the dinner table; the label ties it is with the 105-year-old line of Wagner products.

PLASTIC CLOSURE offers a choice of either sift or pour openings. Inner sealing disk is removed in first opening.

A kind of common-sense flexibility of mind can be a valuable asset in package planning. It permits a company to take proper advantage of something new and different although the new idea may seem to be an abrupt departure from firmly established and successful company policy. The point is well illustrated by the choice of a modern plastic dispensing canister for a new food seasoning introduced in April of this year by the venerable Philadelphia firm of John Wagner & Sons, Inc., "importers and spice merchants since 1847."

This 105-year-old firm, founded upon a cigar and wine importing business, early developed an extensive line of spices, seasonings and condiments through its many foreign connections and built up a loyal following for these items among Philadelphia's Main Line families and epicures in all parts of the country. For a number of years the seasoning and condiment line has been given a certain amount of national distribution under the Wagner label.

In the fall of 1951 the Wagner firm began introducing its line of more than a hundred items into fine food stores in large cities. In preparation for this move, the labels were redesigned; the former severely utilitarian white labels printed in black and red were replaced by new labels designed for a warm, colorful appeal.

The new labels are very definitely and intentionally not "modern" and are applied to the same antique-mold bottles which the Wagner firm had been using for many years. Label backgrounds for the spices are in a shaded tan color, very light at the center and shading darker at the borders. Across top and bottom of the spice labels, growing spices are shown in a red, tan and green border design; the vinegars are bordered with green and purple grape clusters. The hand-lettered logotype appears in reverse—the only white on the label—on a red ribbon background.

The dominating considerations in the choice of this design were to retain the suggestion of the Wagner background and tradition, while at the same time providing a label that would be colorful and eye catching

when displayed in the mass on store shelves or on the special herb-and-spice-department racks provided by the company for full-line outlets.

The break with this tradition-fostering approach to merchandising came this year when John Wagner & Sons added "Good Taste" to their line. Twelve years of research had gone into this product, which is a bit unlike anything else in the spice line—an all-purpose seasoning to be used "instead of salt and pepper" at the table. It contains monosodium glutamate, salt and a blend of other ingredients including spices and dehydrated onion and garlic. Being intended for table use, as contrasted with the regular line of kitchen spices, it offered opportunities for a new packaging approach.

Inspiration came at the Housewares Show in Chicago last fall, when Wagner President Norwood Weaver and an associate were attracted by a 2-in. molded plastic salt or pepper shaker, square with slightly sloping shoulders, which was part of a line of matching kitchen canisters. It seemed an appealing, compact little thing, equally at home in the kitchen and on all but the most formal dining tables. It was red with white shoulders and a red salt-shaker screw cap. If used as a package, its obvious re-use appeal might justify its cost.

Wagner obtained from the manufacturer exclusive use of the container in the spice field and had the cap redesigned with a rotating top. The top is made easy to turn by a transverse external flange and has a ⅜-in. opening which uncovers either a 3/16-in. hole, for pouring, or a pattern of tiny holes for sifting. The container holds 2¼ oz. of Good Taste. A liner is used under the screw cap to keep the closure tight during shipment; this is removed and discarded on first use by the customer.

Having thus departed from established packaging practices, Wagner obtained a label for the new package which compromised nicely between tradition and modernity. The label is white and bears only the new logotype on its red ribbon, the product's name in an old-fashioned, hand-lettered face and the words "for finer flavor" in the same easy, old-time Spencerian script used on the other spice labels for product identification. A line in small type across the bottom instructs "Use instead of salt and pepper" in a very small face similar in style to that used for the name "Good Taste."

Wagner has no intention of repackaging its entire 108-item spice and condiment line in plastics, but the company does report enthusiastic reception of Good Taste in its modern

DISPLAY RACK helps sell repackaged Wagner line in fancy groceries, epicure departments.

dress. At the first public sale, at a booth at the Flower Show in New York, Good Taste was "easily the largest volume seller." Sales to stores have steadily increased since then and Wagner reports that its salesmen are finding it quite easy to sell the idea to restaurants of putting this on their tables along with other condiments. Restaurants often agree to have a small rack of Good Taste near the cashier's desk to sell the product at retail to those who have sampled it at the table.

Thus the possibilities of the new package have suggested an additional merchandising channel. Basically, however, the choice of a container unlike the others in Wagner's line was made because of the different conditions of use; most of the items are intended for use in seasoning foods during preparation, but Good Taste is meant to be applied right at the table.

Mr. Weaver sums it up like this: "There are two sides to the penny: the product is good, just as good as we say it is, and wins its own way right from the start, but before that, and continually, the package plays its part in getting attention and reminding the consumer of its use."

REGULAR LINE of more than 100 seasonings and delicacies established a new label style last year; these three items are typical. Colorful borders identify base of each product (herbs, grapes, tea leaves) and, together with distinctive typography, provide just the right atmosphere.

CREDITS: *Label designs for entire line, Egmont Arens, 480 Lexington Ave., New York 17, N. Y. Good Taste containers molded of Catalin styrene by Dapol Plastics, Inc., Worcester 5, Mass., Labels, Lord Baltimore Press, 1601 Edison Highway, Baltimore 13, Md. Bottles and cork closures, Armstrong Cork Co., Liberty St., Lancaster, Pa.*

Packaging's Hall of Fame®

FORTY-FOURTH OF A SERIES

Domino SUGAR

More truly, perhaps, than any other product, sugar exemplifies the fundamental economic philosophy of packaging.

It is a classic example of progress, within the last 50 years, from the barrel to the package (the sugar barrel being contemporary with the late unlamented cracker barrel). It proves that the packaging principles of protection, convenience, economy and eye appeal apply even more strongly where the competition is fiercest and the profit squeeze is most severe. And it illustrates the basic law that, where other competitive factors are limited, the brand that best makes use of packaging will get the lion's share of the market.

The United States consumes more than 8,000,000 tons of sugar per year, the largest user in the world. The average American eats about a hundred pounds of sugar annually. Through forceful promotion, he can be induced to indulge his sweet tooth a little more, but as with all food products there is a limit to his gastronomical capacity.

The over-all U. S. market for sugar is, therefore, pretty well set and about the only way the individual sugar refinery can increase its business, aside from normal expansion due to continually growing population, is to increase its proportionate share of this market.

Profits of a mere fraction of a cent a pound are represented by the competitively fixed spread between raw material and production costs on the one hand and the price received for the refined sugar on the other. Success, therefore, is solely dependent on high volume.

The performance of the branded sugar package in helping to sustain large volume and to win competitive advantage is one of the great achievements in modern food merchandising. In the sugar industry the package that stands out above all others for selection to the position of honor in *Packaging's Hall of Fame* is American Sugar Refining Co.'s Domino.

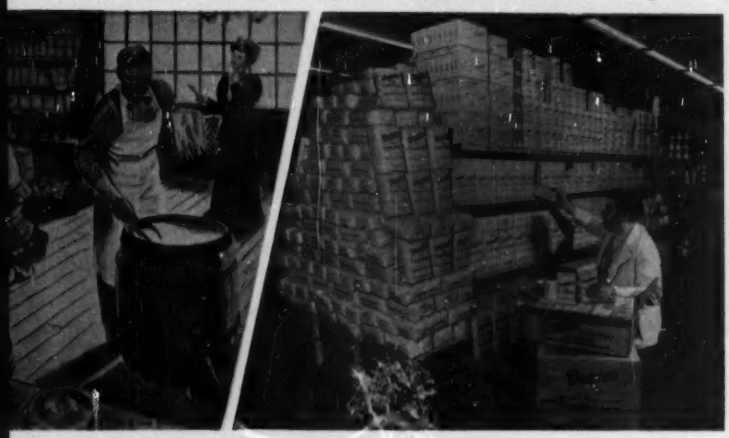
American Sugar Refining is one of the world's largest manufacturers and distributors of a single food product. In the sugar industry it is the outstanding leader in point of sales, being about twice as big as its nearest competitor. And the owners of the famous Domino trademark probably have more packaging firsts to their credit than can be credited to almost any other staple food product on the market.

American Sugar Refining Co. was the originator of the sugar carton (1899)—one of the strongest influences in bringing about the end of bulk selling of unbranded sugar at the retail level. It was first in its industry to use automatic packaging (1912), installing the first machines for the filling and sealing of cartons mechanically.

It was the first refiner in this country to put out individually wrapped cut sugar tablets (1916)—thus one of the earliest pioneers in high-speed unit packaging—and originator of the convenient tab which effects easy opening of the wrapper. It was one of the earliest producers of individual, one-service packets of loose sugar served in restaurants and was the first refiner to use a heat-sealed envelope for this purpose. And it was first to introduce a wrapper containing two cubes of sugar.

It was first in the sugar industry to adopt visibility packaging by the use of a transparent window carton, orig-

IT'S A FAR CRY from the sugar barrel where tabby cats played to the clean, convenient, accurately weighed packages of sugar on mass display in the modern supermarket. Domino Sugar's part in this development is one of the great achievements in present-day, modern food merchandising.



NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- **Its dominance in the sugar market demonstrates the power of packaging in building sales where other competitive advantages are limited.**
- **It was first to take sugar out of the barrel and give it the benefit of packaged brand identity.**
- **It was first to use the sugar carton, first with automatic packaging and first to introduce single-service packaged sugar.**
- **It was among the first to prove that trademark promotion can be made to pay off in packaged sales.**

inally for its pink and yellow tea sugars during the '20s and later for its diminutive cube sugar called "Dots" introduced during the late '30s.

Among additional claims to fame, the company reports that it was the originator of the idea of packaging sugar and cinnamon together—first in an oval package (1915), later in a round fibre container and today in a decorative, shaker-top glass container that can go right to the consumer's table.

American Sugar was also the first refiner to use platform trucks for warehousing—a forerunner of the great palletizing development.

The two men mostly responsible for making the familiar Domino package practically synonymous with sugar and for winning the advantages for American Sugar Refining of the only form of monopoly that is legal and beneficial—the monopoly of trademark—are Earl D. Babst, former chairman of the board, and Joseph F. Abbott, now president of the company.

Mr. Babst, who began his career as a lawyer, contended that there was nothing to gain from monopolizing a trademark "except by and with the approval of the public (expressed in terms of purchases) and a company which takes advantage of that monopoly to sell inferior or inadequate merchandise under its trademark does so at its own peril and certain loss" (*Fortune*, February, 1933).

In 1915, he went to American Sugar Refining Co. as president from the vice presidency of National Biscuit Co., where the Uneeda Biscuit package had started the revolution that replaced the cracker barrel, demonstrating how an anonymous food product, put in a protective package, given a name and backed by national advertising could win wide national markets.*

TODAY'S PACKAGED LINE offers the modern homemaker a kind of sugar for every baking, cooking and serving need. The American Sugar Refining Co. claims for Domino the most complete line of sugars in the world.

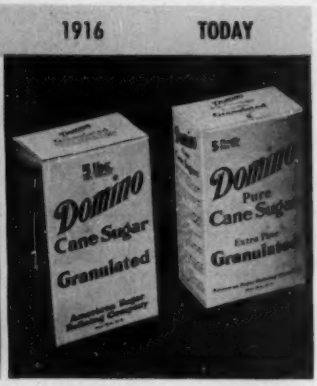
Mr. Abbott, also a lawyer, went to American Sugar Refining a few years later, first as general counsel, and was elected president in 1929. Throughout his regime as chief executive officer, Mr. Abbott has perpetuated and fortified Domino's leadership and prominence in the packaged sugar field. Under his administration, many millions of dollars have been expended for new and improved packaging equipment and many millions more were spent for expanded advertising and sales promotional activities.

Both of these men were firmly convinced that by packaging a product of consistently high standards under an easily remembered name like Domino that could be widely advertised, the company could lead the field.

American Sugar had used the name Domino on consumer-sized packages since at least 1901, as shown by a sample of a 5-lb. Crystal Domino carton of that date still in the company's archives, though a predecessor company had obtained a trademark on "Domino" as far back as 1885 and had been using the name for domino-

* See "Uneeda Biscuit," MODERN PACKAGING, February, 1949, p. 82.

EARLIEST USE of the name Domino on a consumer-size package was for a 5-lb. Crystal Domino carton dated 1901 in the company's archives. By 1912 the packages began to take on the familiar appearance so widely recognized today.



FAR AHEAD OF ITS TIME, the yellow Domino package with blue and red lettering has changed but little in 35 years. The simple treatment and bold lettering continue to be strikingly identifiable.

shaped pressed sugar pieces sold in half barrels only. Further, the company had the mechanical set-up for producing packages at reasonably high speed. But the art of promoting packaged sugar still had a long way to go when Mr. Babst and Mr. Abbott first became associated with the company.

In those early days—less than 40 years ago—it wasn't easy to persuade grocers that the higher price they paid for Domino in neat, protective, small consumer packages (then about 40 cents more per 100 lbs. than now) was more than compensated for by the losses that resulted from measuring sugar with a scoop and giving customers a little overweight on each scoopful. Today consumers and dealers take the advantages of packaged sugar for granted. American Sugar Refining manufactures about 40 kinds of sugar in more than 100 different types of packages—the most complete line of sugars in the world.

It took courage to appropriate large sums of money to build a name for Domino. In 1916 a reserve of $1,000,000 was established for trademark advertising. This was one of the earliest occasions where a trademark was given such recognition in the balance sheet of a great industrial corporation—all because of the little packages of quality products on which the company was proud to put the name, Domino. A year later the company's annual report stated, "We are adding the sum of $1,000,000 to our Trade Mark Advertising Reserve, bringing that item up to $2,000,000."

The foothold this advertising gained in public favor for the Domino package remains today one of the company's strongest assets. It is a heritage which American Sugar guards tenaciously with continued advertising support and in the continued development of new packaged sugar products to meet changing consumer requirements.

Refined cane sugar in its familiar packaged forms—pure-white granulated; glistening, convenient tablets; confectioner's sugar; powdered sugar for table use, and old-fashioned brown sugar—is so well recognized today on the pantry shelf it would seem that sugar must have come down through the ages as a fundamental item of man's diet, like grains, fruits, vegetables, meats and eggs. Such, however, was not the case.

Modern cane-sugar refining in the United States began at about the close of the Civil War. Prior to that time refined grades were a luxury and limited mostly to molded sugar cones which had to be cut or sawed into blocks or ground into powder.

The march to large-scale, low-cost production in sugar refining began about 1870 through consolidation and replacement of small plants with large refineries. It was during this period, in 1891, that the American Sugar Refining Co. as such came into being, although its roots run back for more than a century. With the improvements in refining came better quality and greater diversification of the product, offering the modern homemaker a kind of sugar for every baking, cooking and serving need.

GOOD-WILL AMBASSADORS—in restaurants, hotels, schools, hospitals—on planes, trains and ships—are the individually wrapped Domino tablets and single-service packets. You can't go far without encountering Domino, because these efficient little packages are turned out at the rate of 4,000,000 a day, representing early pioneering in high-speed unit packaging.

Probably no phase of the sugar development, however, exceeds in importance the introduction of packages to carry the product into the home. Prior to 1890 practically all sugar was delivered to the grocer in barrels. During the '90s the American Sugar Refining Co. began to pack sugar at the refinery in small cotton bags of about 5-lb. capacity. The first 2-lb. cartons appeared in 1899. But the originators of the package idea were ahead of their time. Wholesalers refused to handle packaged sugars. Retailers objected that the weight units did not meet customers' requirements. Some dealers feared that packaged sugar would invite new competition by inducing many small shops to sell sugar that did not handle it previously.

It was not until 1915, when American Sugar put a driving force behind the Domino package, that consumers and dealers were finally convinced of the merchandising advantages of small packaged units such as are now the life blood of all sugar selling.

Although the first 5-lb. carton of Crystal Domino sugar is dated 1901, it was not until 1912 that the package took on the appearance of the familiar yellow package with blue and red lettering so widely recognized today.

Nobody knows just how the name Domino was chosen, except that at the turn of the century the company was using a number of brand names simultaneously, among which was Domino. Recognizing the need for emphasis on a single mark, Domino was selected as the best for the purpose. It carried with it the ideas of the Latin word, "dominari," suggesting leadership and dignity, and was thought to have an attractiveness and distinctiveness superior to other long-used names that might have been chosen. Selection of the brand name Domino also was certainly appropriate in the early days of a predecessor company for the domino-shaped pressed sugar pieces sold in half barrels. And the illustration of dominoes once used on the packages and the shape of the more-recently developed cut tablets have built up an association of the two in the public mind—all of which has helped to strengthen the trade name, Domino.

By 1912, automatic production had been started and the package used at that time carried on one of its panels an illustration of this new mechanical packaging, calling attention to the cleanliness and quality of the product due to modern production methods. Except for slight typographical changes, clean-up jobs for improved legibility and the inclusion of various mandatory copy changes, the design of the 1915 packages is very little different from the Domino packages on the market today—a remarkable example of package continuity and strikingly simple design far ahead of its time.

A PRIZE WINNER in progressive packaging is this window carton for Domino Dots which received one of the 1951 Folding Box Competition awards. The shopper can see what she is buying and the spot-glued flaps make an easy-to-open, reclosable, convenient package.

The most important modern improvement in package construction is in the closer tolerances to which the cartons and paper bags are made today to meet the requirements of handling on increasingly high-speed equipment. The paperboard is also of better quality through the use of more kraft and better filler material to give greater strength. Better methods of producing paper and paperboard are providing cartons and paper bags with greater resistance to odors. For packages where liners are required to prevent moisture loss, the company uses waxed sulphite of highest quality.

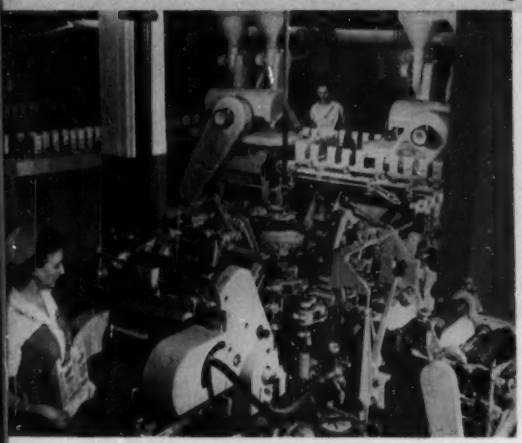
All of the Domino cartons are made today by the company's own subsidiary, the Brooklyn Cooperage Co., with plants in Versailles, Conn., and Philadelphia—a firm whose former business of sugar-barrel manufacture has now been converted entirely to the production of cartons and small paper bags. It has an output of more than a million cartons in an 8-hr. working day and the steadily growing trend to sealed paper bags for small 2-, 5- and 10-lb. units of sugar has motivated the company to enlarge its package-making facilities with the installation of additional equipment for paper-bag production in a modernized building in Philadelphia.

Always on the alert for package im-

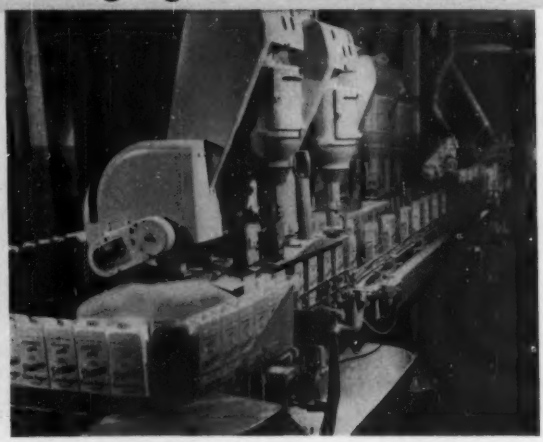
PIONEER in easy-opening devices, Domino introduced convenient tuck-in flap on specialty sugar cartons in 1951 that eliminates tearing of inner liner, permitting it to be rolled back.

ORIGINATOR of convenience idea of packaging sugar and cinnamon together, Domino adopted a shaker-top, private-mold glass container for this product in 1950 to replace fibre container used since 1924. Container mold design resembles sugar crystals.

Automatic packaging is standardized



CARTON BLANKS, placed in magazine of machine, are formed and bottom sealed before going to filling spouts. Equipment is adaptable to 1-, 2-, 5-lb. cartons.



INITIAL FILLING is followed by vibratory action to settle the sugar and a final fill to obtain the correct weight. Filling and sealing lines are operated at speeds up to 70 per minute.

provement for the convenience of the consumer, the company has been a pioneer in easy-opening devices on its cartons. A recent innovation adopted in 1951 is a new tuck-in flap on 1-lb. cartons of Domino specialty sugars to climinate tearing of the inner liner. Finger-tip pressure on the flap discloses an easily rolled back wax-paper liner.† Users merely roll open the heavy moistureproof paper, then roll it back to keep the sugar fresh and clean. Other improvements through the years include continued studies for improving the seals. Sugar is an annoying product if it is not properly sealed and American Sugar Refining has worked constantly to provide a siftproof seal.

The company also is continually reviewing its products and packaging to meet new merchandising demands. In 1951 it introduced a package for Domino Dots—small cubes of pure cane sugar—which won an honorable mention in the Folding Box Competition as "an outstanding example of progressive packaging." The objective was greater display value by the use of a round transparent-acetate window on the main panel imprinted with "198 cubes" in red on the transparent window, making it easy for shoppers to see exactly what they are buying. Another important feature of this package is its easy-to-open closure; the top and side flaps are spot glued to produce a tight package, yet they part easily when fingertip pressure is applied. The flaps can be tucked back into place to protect the contents until they are completely consumed.

† See MODERN PACKAGING, April, 1951, p. 147.

Red and blue lettering on Domino yellow board is standard for all packages and maintained by periodic spectrophotometric readings.

In an operation covering the variety of packages used for 40 different types of Domino sugar products—cartons, bags, wraps, cans, jars, shipping cases, etc.—may be found equipment to perform almost every kind of packaging task. All packaging operations are now standardized to maintain the same quality in the company's five big refineries in Brooklyn, Baltimore, New Orleans, Philadelphia and Boston.

First in importance, of course, are the operations for carton filling and sealing. This equipment is adaptable to 1-lb., 2-lb. and 5-lb. cartons. Carton blanks, stacked in a magazine of the machine, are formed and bottom sealed before they go to the filling spouts. Here the operation consists of two fillings, the first followed by a vibrating action to settle the sugar and the second for final fill to obtain correct weight. The cartons are top sealed automatically. The carton-filling and sealing lines run at speeds up to 70 per minute. Finished cartons are automatically loaded into a shipping container and sealed. A very important part of this entire procedure is the master scale room where measuring weights are checked constantly for accuracy in strict conformance with Government standards.

Automatic net-weight scales are used in the filling of 1-lb., 2-lb., 5-lb., 10-lb. and 25-lb. single and 100-lb. multiwall paper bags of granulated sugar, which are closed automatically. New high-speed equipment is used for the glass, shaker-top containers of sugar and cinnamon.

One of the most dramatic operations at American Sugar is found in the battery of wrapping machines that wrap individual tablets of Domino sugar at speeds up to 130 a minute. The easy-opening paper-tab packages produced on these specially built machines seem to have a peculiar fascination for consumers. Even today, after the company has been producing these little wrapped single-service tablets since 1916, American Sugar receives about a dozen or so letters a month asking what the tiny, quarter-inch slit on the inside end of the paper is for—inquiring if it is true that the Domino tablets could not be tightly wrapped if the slit did not allow for expansion of the paper—or if the slit is placed there to air condition the sugar!

in five big refineries

INDIVIDUAL TABLETS, wrapped at 130 a minute, are hand placed in cartons. Slit on inside end of wrapper, made by pin on wrapping machine, controls wrap as it moves forward.

PACKET-MAKING MACHINES for heat-sealing single services in the Brooklyn Domino plant. Each machine will form, fill and heat seal approximately 200 packets per minute.

Actually the slit is made by a pin on the wrapping machine, which controls the wrapper as it is carried forward to meet the sugar tablet. Without the pin, the machine could not get a purchase on the individual wrapper to carry it into position.

Another important packaging operation is the making of tiny, single-service heat-sealed packets of Domino Superfine sugar for restaurant use and for individual servings on airlines, dining cars, in hospitals, etc. These packets, now made of both paper** and printed cellophane, are produced on automatic machines which form, fill and heat seal approximately 200 packets per minute. The units are equipped with an electric-eye cut-off mechanism for registering the printed design properly and operate with dual action so that they may be run at half speeds or with a different product on each side if required.

The clean, sanitary, individually wrapped Domino tablets and the single-service packets have virtually brought about the disappearance of the open sugar bowl on restaurant tables and several states have enacted public-health legislation prohibiting the serving of unprotected sugar in public dining rooms the same as unpackaged soda straws have been outlawed.

** See "Heat-Seal Packet Papers," MODERN PACKAGING, August, 1952, p. 135.

Today these individual-service packages account for a sizable amount of American Sugar's unit sales, being produced at the rate of 4,000,000 units a day and they are one of the most powerful aids in bringing the Domino name right to the table where it is often a fascinating conversation piece in hotels, restaurants, schools, industrial cafeterias, hospitals—on planes, trains and ships. You can't travel far in the United States without encountering Domino.

The literally billions of Domino packages distributed every year are indeed their own best advertisement wherever they go. But over the years the company has never relaxed its efforts to advertise the Domino name, since the teens when Domino was getting its first brand foothold. In the late '20s Domino was one of the early users of radio, sponsoring Ida Bailey Allen over CBS and a school of cookery conducted by Mrs. D. H. Goudiss over NBC. Currently, the advertising program includes the use of over 300 daily newspapers and farm papers in more than 200 cities throughout the company's distributive area, plus radio and television in certain markets.

The packaging is also supported by the company's own aggressive selling organization. Adequate and competent staffs at its various sales offices are augmented by an integrated web of resident direct brokers located in some 140 cities and by "general" sugar brokers operating in such markets as New York, Philadelphia and Chicago. While the margin of profit on sugar may be only a fraction of a cent per pound net to the refiner, sugar is reported to be one of the fastest-moving items in the grocery store,

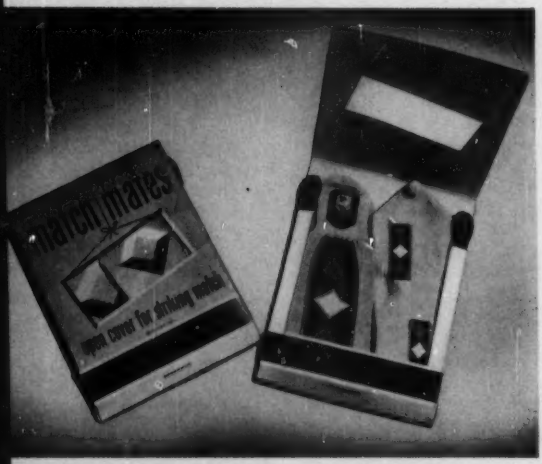
(*This article continued on page 212*)

QUALITY CONTROL and continual research have been important factors in Domino's success. This photo shows central control laboratory at the Brooklyn refinery.

Tray package stops shopwear

Ticklish inventory problems have been overcome by Scientific Plastics Corp.'s new packaging for hearing-aid replacement cords which gets them out of the twisted jumble in dealers' drawers and on the counter where they become an impulse item reminding the customer of replacement. The company has to stock more than 100 plug styles to fit all makes and models and a dealer who services only one or two makes must have as many as a dozen cord styles. The new package uses an unglued snap-up tray inside a glued sleeve. A section of the sleeve top is cut away to show a portion of the tray printed with the name and model number of the hearing aid that the cord is designed to fit. These show clearly when packages are in the display box. Sleeves bear no coding and fit any tray. The tray design permits the package to be partly opened, exposing plugs for test in customer's hearing aid without unrolling wire leads, eliminating shop-wear. Package uses the company's new trademark.

CREDITS: *Design, Robert I. Goldberg, New York. Package and display box, The Elm Press Corp., New York.*



Punning for sales

Package and copy both carry out a clever play on words in this giant matchbook-styled gift folder used as the package for a matching set of men's accessories by Chester H. Roth Co., New York, hosiery manufacturer. The gift package shown holds a pair of socks and a necktie arranged so that the matching patterns show through the transparent window; the angled window is edged with a printed frame effect made more realistic by a printed hanging cord. Giant simulated matchsticks flank the contents, serving both to keep them in place and to add to the realistic effect when the package is closed. Colors are yellow with gold and black. The package is copyrighted by the designer, who will license it in other fields.

CREDITS: *Design, Alan Berger, New York. Folder, Service Carton Co., Brooklyn, N. Y.*

HISTORIES

Carton saves store manhours

Mass floor displays of Carnation evaporated-milk cans can now be built in a small fraction of the store manhours formerly required for the job because of this new-type case now being used by the Carnation Co. The new case also helps to speed up shelf stocking, a valuable aid in supermarkets where restocking must go on almost continuously during selling hours. Carnation's new cases have a dotted line printed near the bottom.

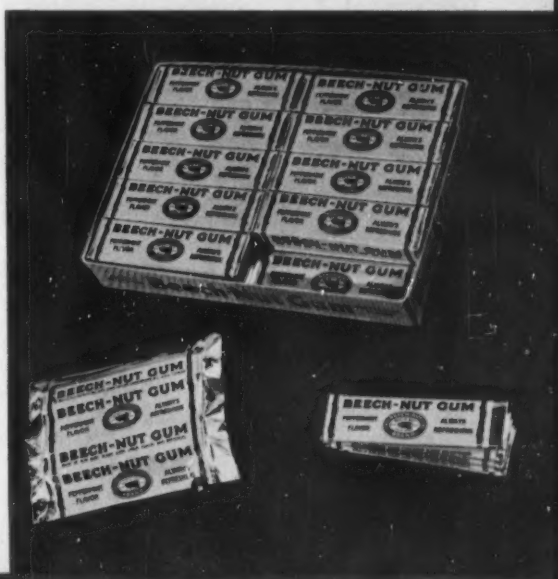
In use, the store employee cuts the case along this line, lifts it into position and pulls away cut-off portion. This leaves neatly stacked cans, which Carnation cases right-side-up and correctly oriented for most efficient display effect. The new case pack is used for both tall cans and the "baby" size. It also provides convenient tray units which make cans easy to handle, add to stability of high displays and repeat the Carnation name in strong block letters. The discarded case tops have plenty of strength to serve as customers' carry-out cartons.

Warehousing instructions for the new cases are for upside-down storage.

Printed foil for 5-stick wrap

High-gloss printed foil has been adopted for the overwrap on the five-stick unit packages of Beech-Nut chewing gum. Previously, the five-stick packs were double overwrapped, using plain foil-to-paper wrap followed by a final reverse-printed transparent overwrap. The new high-gloss printed foil supplants this double wrapping. The recent short supply of transparent materials is said to have led to the new development; however, Beech-Nut reports that the new overwrap gives improved shelf life to the product. Price is called competitive and the package retains its identification and sparkle. Beech-Nut uses the printed foil in roll form on machinery which overwraps and wax seals at 120 five-stick units per minute. One machine station in the line is eliminated.

CREDIT: *Printed foil, Reynolds Metals Co., Louisville, Ky.*



DESIGN HISTORIES

Focus on Grade-A shield

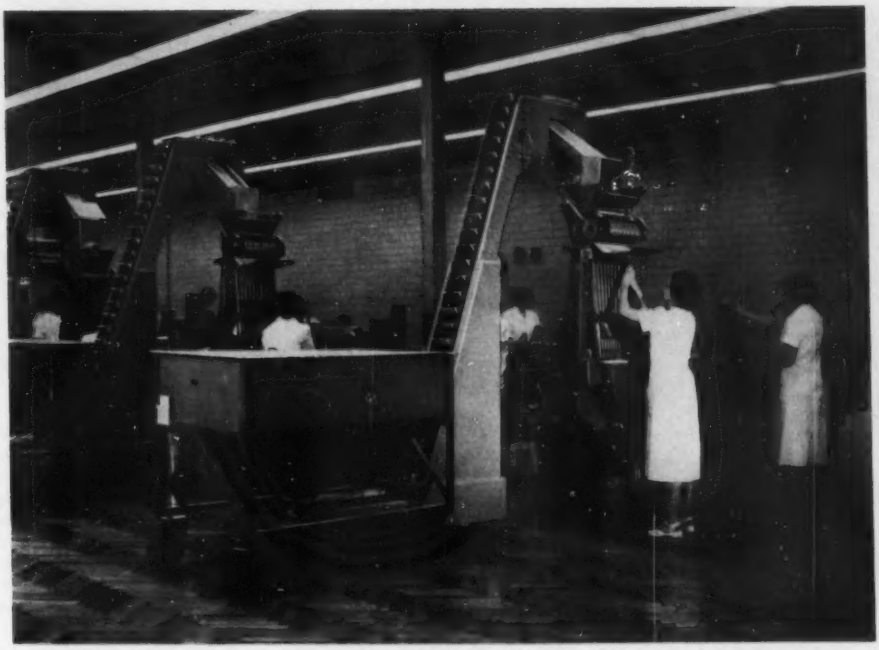
Labels for Dewco canned foods have been redesigned to get a sharper focus of customer attention on the U. S. Grade-A shield. Dewco, which earns the right to display this emblem by packing under continuous Dept. of Agriculture inspection, decided that the old labels failed to proclaim this fact with sufficient force. New labels spotlight the Grade A shield by placing it at a focal point of label in front, directly under brand name, at top center of product vignette. The vignette is planned to give the impression of a window view of can contents. The back of can, once heavy with copy, now carries substantially the same information, but rearranged to highlight key points of customer interest. New on back of can is Dewco name, in same cartouche treatment as on front, and cartoon character representing feminine "inspector." Reverse text on center horizontal color band stresses continuous U.S.D.A. inspection; color panel at bottom carries can size, weight of contents, number of cups and servings.

CREDITS: *Label design, Royal Dadmun, Baltimore, Md. Label, H. S. Crocker Co., Inc., San Bruno, Calif.*

Safeguards cigars out of humidor

Individual glass tubes, sealed with new moisture-tight polyethylene stoppers, promise to help solve for higher-priced cigars one of the industry's biggest headaches—dry cigars. Store cases often fail to provide proper protection, despite costly dealer-education campaigns on the importance of humidification. With this moisture-retaining package, it is reported, cigars can be safely displayed on the counter top where impulse sales are briskest. A pioneer in using the glass package for a nationally distributed brand is American Cigarette & Cigar Co., which uses this compartmented counter display box for 25 of its new La Corona Crystales. Dignified but forcefully worded, drop-front panel box stresses "See what you buy," a reference to smokers' reliance on leaf color as a gauge of quality.

CREDITS: *Glass tubes, Kimble Glass Div., Owens-Illinois Glass Co., Toledo, Ohio. Polyethylene closure, Lumelite Corp., Pawling, N. Y. Display box, Alexander Ungar, Inc., New Brunswick, N. J.*



HEAD OF THE LINE for each of 11 packaging lines handling Pharmaco's gum-pellet remedies is a continuous elevating conveyor which takes product from canvas-lined hoppet truck and boosts it to filler's input hopper. Sensing device in hopper turns lift conveyor on and off. This automatic lift was the key mechanism in the shift to one-floor plant; in previous plant hoppers were gravity fed from floor above.

A plant goes horizontal

WHITE LABORATORIES FINDS SOLUTIONS TO SOME PACKAGING PROBLEMS

TYPICALLY ENCOUNTERED IN MOVE FROM MULTI-STORY TO ONE-STORY PLANT

With today's trend to economical one-story factory construction in suburban locations, packaging management is frequently faced with the problem of adapting equipment, originally designed for multi-floor flow of operations, to the quite-different principle of straight-line, single-floor layout.

How this problem may be met is well demonstrated by White Laboratories, Inc., and its affiliated company, Pharmaco, Inc., which has recently moved from a multi-story building in Newark, N. J., to a handsome new $3,000,000 one-story plant in nearby Kenilworth.

Pharmaco's products, which include Feen-a-mint, Aspergum and Chooz chewing-gum remedies, had been gravity fed to the hoppers of 11 high-speed automatic packaging machines in the company's outgrown four-story building in Newark. In order to use the same packaging equipment in the new plant without drastically rebuilding the machines, some way had to be found to raise the gum pellets to the high hopper level of the machines, a good 8 ft. above floor level. Required was a system that would gently elevate the shiny, smoothly coated bits of gum that 8 ft. with no danger of chipping the coating. It also had to feed the gum at an easily controllable rate so that the load in the hoppers could be accurately maintained at the level which experience had proved most effective for good operation.

Space was a problem too; the new plant devotes a great deal of its quarter-million square feet of floor space to the packaging operation, but no space could be spared for long, gradual inclines.

The answer to these demands turned out to be the use of new-type elevating conveyors at the filling stations. The conveyors, one for each filler line, are used in conjunction with canvas-lined hopper trucks, two of which form a

TYPICAL PACKAGES and products handled at new plant of White Laboratories and its affiliated company, Pharmaco. All are chewing-gum pellets.

unit in the company's precise batch-control system. The gum products—after coating, polishing and weighing—are wheeled to the lines in the hopper trucks and one of the trucks is centered over a vibratory feeder pan which extends from the base of the elevating conveyor. This feed pan induces a controllable flow of gum pellets from the canvas funnel-bottom of the truck.

From the feed pan, the gum dribbles into the stainless-steel buckets of the endless-chain conveyor. The loaded buckets go into an almost vertical climb, level off and discharge their loads gently, not end-over, but through a side chute at right angle to direction of travel.

High degree of control

By adjusting pan vibration amplitude and the buckets' travel speed, it is possible to control accurately the rate of product delivery. It is also possible, through manipulation of the variables, to select the best style of handling for an individual product at any given delivery rate—full buckets moving slowly or nearly empty buckets moving rapidly, for example, may deliver at the same rate, but one or the other will work better in practice. This depends on the product and filling-machine characteristics. A switch in the filler hopper, activated by the quantity of product contained, controls an on-off switch for the conveyor in this installation.

For Pharmaco's gum products, the most satisfactory delivery proved to be one which supplies the product to the filler hopper at the same rate as the filler uses it, with sufficient accuracy to maintain a predetermined weight of product in the hopper within fairly narrow limits. Under these conditions, the filler has the least tendency to jam or strangle. Pharmaco therefore adjusts its vibrator pans for slow, gentle delivery and runs the buckets fast and fairly light.

Not only is the method economical in floor space and adjustable in operation, but handling of the coated-gum products has been gentled so that chip and break waste and filler stoppage are significantly reduced in the new plant.

There is still another point in the White Laboratories-Pharmaco installation where a move to a one-story plant raised a problem that was effectively solved.

In the former four-story building, cases of the packed gum product had been fed to the ground level warehouse-shipping floor through a system of gravity slide chutes. With all operations on one level, a different handling method was needed. And here again Pharmaco was able to make new equipment pay off in smoother, more-efficient handling.

The 10 packaging lines for the gum products count-fill into a variety of packages (holding two to 80 tablets), load these into dealer cartons and case these for shipment. Cases must then travel to a large adjustable case sealer. When many or all of the lines are operating at once, the combined cased output feeding to the case sealer consists of an assortment of three different products, each with a slightly different case size. If these cases reached the sealer scrambled, the operator of that machine would spend all of his time adjusting it for case size and batch-code-date marking. Warehousing would be complicated also.

The solution to this problem is the use of three parallel waffle-tread conveyor lines, side by side, which tap the output ends of all 10 filler lines. One track of the conveyor is assigned to each of the three gum products and serves as an accumulator for filled but unsealed cases. The lines slope slightly so that gravity moves the cases to a low point near where the conveyor line passes through a small portal into the warehouse. Right behind the portal is the case sealer. The last section of the conveyor is powered by a rubber belt running under the waffle tread. This provides a gentle powering, so that if movement of the cases is stopped while the power is on, the waffle wheels do not continue to turn. It might be described as an idling action.

The case-sealer operator watches the three lines filling up with cases and when one is nearly full he connects it

to a short switching section of powered conveyor, adjusts the sealer clearance, pressure and batch marker, and brings that line of cases through the sealer. Sealed cases proceed by gravity into the storage area for palletizing and stacking.

Thus used, the three-tracked conveyor line accumulates and unscrambles cases while feeding them into storage in an efficient manner.

One-level, one-room packaging

A third problem for packaging in a one-level plant involves plant layout and the routing of materials. In the multi-level plant, a common practical scheme is for final processing to take place on an upper floor, packaging on a floor below and storage of finished goods below this, with gravity flow from stage to stage. This was the type of vertical operation Pharmaco had been using in the old four-story building.

The solution in the new plant again was by careful planning made to pay dividends in more efficient operation and supervision and in simplicity. All packaging—both Pharmaco's high-speed automatic operation on gum products and White Laboratories' diverse packaging operations on a multitude of pharmaceuticals—was located in the new building in one vast packaging chamber. This is the core of the layout, with all other functions distributed about the periphery. Centralizing the packaging operation in this manner reduces materials-handling problems to the minimum.

In the packaging area itself, it has been found that having all packaging in one unobstructed space makes efficient supervision easy. For example, a supervisor watching a special-order, small-batch pharmaceutical packaging job can monitor, by sight and hearing, the operation of the battery of high-speed gum machines. The air-conditioning problem is also simplified, as the type of controlled temperature and humidity needed for pharmaceutical packaging happens to be the same as is required for the gum products' packaging.

This is a desirable condition, company executives point out, as temperature and humidity have considerable effect on the gum coatings. Either excessive dryness or moisture can slow down packaging by jamming the high-speed filling machines and either one raises the waste rate. The desired air conditions are easier to maintain in a single large room than in a number of smaller compartments, primarily because there are fewer doorways and other openings. All entrances to the packaging room are through pairs of double swinging doors which form air-lock vestibules.

The company moved to the new plant almost without interruption of operations. All existing packaging equipment was carried over to the new plant and it was necessary to add only the 11 conveyor lifts and a triple section of roller conveyor, plus the inexpensive canvas-lined hopper trucks.

CREDITS: *"Robo-Lift" elevating conveyors and portable hoppers, Counsel Machine Co., Inc., 8 Hathaway St., Wallington, N. J. Horizontal conveyors, The Lamson Corp., Syracuse 1, N. Y. Case sealer, Standard-Knapp, Div. of Emhart Mfg. Co., Main St., Portland, Conn. Fillers, overwrappers and cartoners, F. B. Redington Co., 110-112 S. Sangamon St., Chicago 7.*

OVER-ALL VIEW shows the line-up of the filler (background), the cartoning station and the cellophane overwrapper in each of the 11 packaging lines. The triple conveyor shown in the foreground handles the production output of all of the lines and the various products through a flexible system of controls.

OFFICIAL U. S. NAVY PHOTOS.

NEW CONCEPTS OF

END OF THE LINE for packaged supplies is supply dump like this at Hungnam, Korea. But the big packaging problem today is not combat handling, but previous long-term storage.

TODAY WE ARE FEEDING THE WAREHOUSES RATHER A FAR GREATER CONSIDERATION OF THE STORAGE

It is an old story by now that the onset of the Korean conflict pointed up anew to industry the need for adequate packaging of military supplies. While the lessons of World War II had not been forgotten, they were ignored to a great extent by many segments of industry during the quasi-peace that followed.

But the swinging of the pendulum to the other side, with the contractual re-emphasis on "military packaging at the overseas level," has brought about a situation quite different from that encountered during an all-out war. In the first place, the military is purchasing in smaller quantities and, in the second place, though the packaging is branded as what is ordinarily called the "overseas level," it is actually being done for "long-term storage." We must, therefore, revise our concepts and reach a new evaluation concerning exactly what is needed in military packaging.

In an all-out war, supplies move at what is a rapid pace for the military, through the various echelons of supply to the ultimate user, where they are consumed at a high rate. Protection is required to meet the rough handling conditions encountered, the varying temperatures and humidities, the manhandling and, in general, every imaginable hazard except *time*.

The basic problems

It is this element of time which makes the packaging picture so different today. In wartime, the important thing is to get the parts and supplies to the user as quickly as possible, with adequate protection for their hazardous journey. Today, the story is totally different. Parts and supplies are being stored for periods up to 10 years. Stocks are maintained at various stocking points to meet demands wherever and whenever they occur.

Now think what this means in packaging: packages that contain more cubage than necessary place a burden on space and, by wasting space, waste money; packages that are made of materials which do not age well require extensive "cycling" and repackaging, which is a waste of money. Any waste of defense money means either higher taxes or less actual defense equipment.

Much poor military packaging—poor because of bulk, improper protection, too much protection, materials that age poorly in storage—is due to a fundamental misunderstanding of what is required on the part of military and civilian packaging people, as well as misconceived accomplishment by some suppliers. With the specifications outlining what is required, the temptation is for companies to expect that their packers will be packaging experts, just as long as they follow the requirements.

Let's take a few examples.

Method IA8 of JAN-P-116 (or MIL-P-116A) requires, fundamentally, the sealing of an item in a water-vaporproof bag or pouch. An item like a small radio capacitor, for example, is adequately packaged by this method. In his regular commercial package, one condenser manufacturer supplies this item wrapped in a piece of tissue and placed in a small carton. The cartoned item does not really occupy much more space than the item

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* Packaging Coordinator, U. S. Navy Ships Parts Control Center, Mechanicsburg, Pa. The opinions or assertions contained in this article are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval Establishment at large.

MILITARY PACKAGING

THAN THE FIRING LINES; AS A RESULT,

FACTORS IS REQUIRED. By S. S. Horwitz*

itself and the physical protection is adequate. Of course, for long-term storage something better is needed, so the IA8 method is specified. So what does the supplier do? He takes the cartoned item, wraps it in a fold of single-faced corrugated fibreboard held in place with wetted gummed tape and seals it in the kraft-foil bag. Of course, in order to bag such a large item, a large bag must be used, but even so it is easily punctured, so the packager wraps 10 of the bags carefully in cellulosic cushioning and inserts them in a carton, of a size which would hold approximately two or three hundred of the same items as they are packaged commercially.

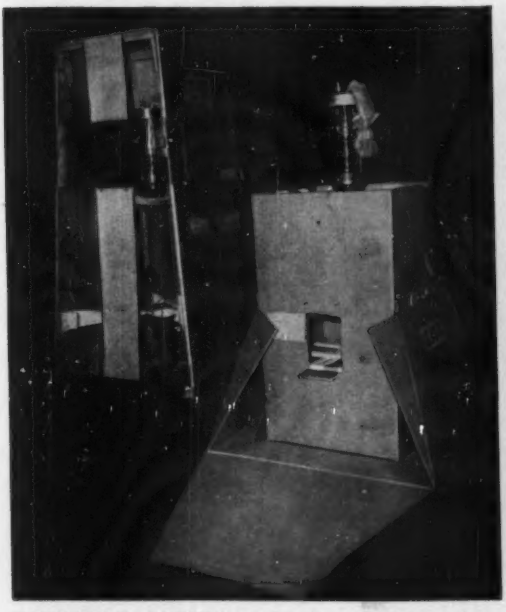
Now, in addition to the tremendous addition to the cubage and the waste of critical material, figure out what the cost of all the operations adds up to. And can that be called good packaging?

For one thing, it is interesting to note what happens to this package when it is received on board a Navy ship. Space is limited, so off comes all the "protection" the taxpayer has paid for and the item is stowed away bare, under conditions where real protection is needed. How much simpler it would be if the item were sealed in a *moldable* pouch pressed to conform to its contours and then re-inserted into the original carton. The carton is not waterproof, you say? No, but the bag is and, with identification both on the bag and the carton, the basic problem of *realistic protection* at minimum size and cost has been solved.

This is an odd situation: Suppliers believe the military packaging people are ridiculous in their demands and the military people wonder how suppliers ever get things to their civilian trade without outlandish corrosion and damage. The answer to the latter is, almost always, that suppliers *know* what their civilian trade wants, but only *think* they know what the military needs. You can't become a packaging expert merely by reading the packaging specifications. The basic principles of packaging are the same for civilian or military.

What is needed

There is an old saying that there are three ways of doing something: the right way, the wrong way and the military way. While that may be true of many things, it does not hold for packaging, regardless of what you may think. Good packaging is *right*



COMMERCIAL PACKING of fragile transmitter tubes (right) is adequate for those going directly into use. But for storage and trans-shipment, Norfolk Naval Depot must repackage them in wood and suspension sling, as at left.

HORRIBLE EXAMPLES of inadequate packaging still turn up. The manufacturer of these precision resistors simply put them in a paper bag inside a carton. Fourteen out of the 16 shipped were broken on receipt at Norfolk.

and a good package, military or civilian, can only be planned by considering all the factors required.

As mentioned earlier, present military packaging, for the most part, is for relatively small quantities and often the cost of designing a really adequate package is prohibitive. It is possible, however, to design a *type* of package for a group of related items.

What is an adequate military package? Since this is the same kind of question as "What is an adequate package *for anything*?" it should be obvious that the answer depends entirely upon the item being packaged, what it is being packaged for and the purpose of the package. Possibly if the majority of the following questions can be answered in the affirmative, it may be assumed the package is not only adequate, but far above present standards:

1. *Is the contained item protected against all deleterious chemical action both from without and within?*

This is usually no problem in military packaging; in fact, the usual thing is to go overboard. In foodstuffs, this type of protection is furnished as a regular practice; it is when we get into parts and supplies that the matter becomes complex. Specification JAN-P-116 (now MIL-P-116A) lists almost a score of corrosion preventives; actually, there are more if one considers operating lubricants, which are also used to some extent. Then there are plastic dip coatings, vapor-tight containers and dehumidified packages.

All in all, this is well covered by the military specifications insofar as the protection from "without" is concerned. But several factors from "within" should also be considered. For example: some greaseproof barrier materials react adversely with certain preservative compounds (polyethylene materials are being found to be poor in long-term contact with mineral oils and greases); in Method I dehydrated packages it has been found that certain pieces of equipment, such as loud speakers, dry out to the point of actual damage to the item; wetted gummed tape retains some moisture, even when dry, due to the gelatinous nature of the gum and, if included in a vapor-tight container, creates a definite humidity hazard; sulfur compounds in rubber may react with metal surfaces in the same sealed container and set up corrosion. Remember, we are not considering a package designed only to carry a product through routine transportation and storage; we are talking about the possibility that the package may sit on a shelf under extremes of temperature and humidity for five to 10 years.

2. *Is the contained item protected physically and mechanically?*

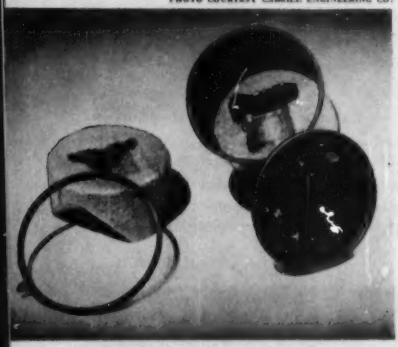
Here again, good packaging is good packaging whether military or civilian. The best package is a "tight" package—no slack, no possibility of movement, cushioning, when required, related to the weight of the item cushioned, and the container itself sturdy enough to protect its contents. Many military packaging people have begun to revolt against flexible packaging, blaming it for poor physical protection, but this is presently a reaction against the "throw-it-in-a-bag" policy of which many of us have been guilty. Many items do not require extensive physical protection; certainly a part like a gasket or a rubber ring can go into a bag and a multiple of the bags placed in a carton, thus furnishing adequate physical protection.

Frequently the simplest method of packaging lies in the use of moldable cloth-backed foil pouches or bags (MIL-B-131A material) sealed around the item, which is then placed in a minimum-sized carton, with cushioning or die cuts for protection, if necessary. Note, by the way, the physical protection *outside* the bag. This will possibly be questioned by the exponents of total waterproofing, who will want the cushioning inside the bag or, even worse, want the carton sealed in the bag. The point is, however, that we want the least possible amount of contained air and dunnage inside the vapor-tight container, since the closer we get to a conforming wrap, the less our worries about moisture condensation and the more compact our package.

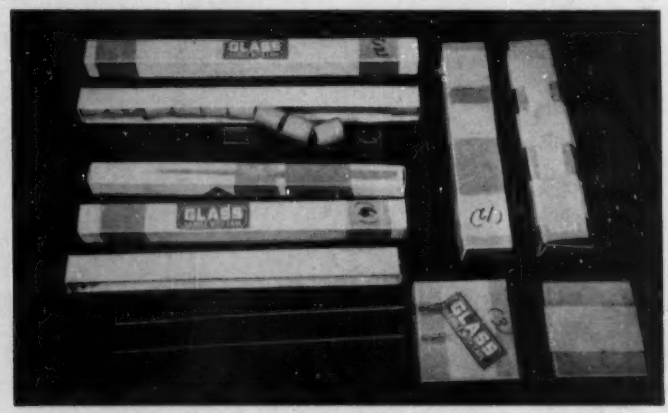
Naturally, if the item has projections or points, some cushioning must be provided to protect the bag. An example of the latest thinking in this regard is specification MIL-P-16898 on packaging of precision optical-glass items.

Like preservation, physical and mechanical protection are also done

PHOTO COURTESY CARGILL ENGINEERING CO.



SUPERIOR shock protection, ease of packaging and handling characterize this new Navy package. The molded rubber inserts are coated with vinyl; parts put in them do not require wrapping.



WHAT ARE THEY? Not a single usable identification mark was applied by shipper. Once shipping container was broken, all identity was lost.

to excess. Packages are not ordinarily designed; they are improvised. And we get ridiculous examples like a steel-cased transformer wrapped in cushioning material and inserted in a carton, which in turn is padded with excelsior in another carton. (This actually happened; yet after all the painstaking "protection," the item broke through both cartons because of the excess cushioning which allowed the heavy part to ram against the walls of the containers.)

It frequently happens that a manufacturer's commercial package actually offers better physical protection than does his military package, because his regular package is well designed while the military one is haphazardly improvised. It would seem that the military, while ahead in the field of chemical protection and corrosion prevention, still has much to learn from industry concerning physical protection.

Where possible, it is often better to attempt utilization of the manufacturer's or supplier's standard package, adapting it as required to meet the military level of protection, than to set up completely different requirements.

3. *Is the container and/or preservative easily removed; can the item be used without extensive processing?*

There is a corollary to this: Can the item be used at all when the container is removed? If that sounds ridiculous, consider the actual instance of an instrument manufacturer —who should have known better—who taped down 10 meter movements to the bottom of a paperboard box with pressure-sensitive tape. First of all, there was no way a storekeeper could issue only one and when the lot was sent to an instrument mechanic for removal, several were stuck down so tight that damage was inevitable.

In regard to preservatives, during most of World War II the bulk of preservation was accomplished with asphalt-base, hard-film compounds and hot-dip petrolatum materials. Both of these are difficult to remove and many a GI remembers the time consumed in soaking and rubbing the paint-like coating or gooey messes. While the hard-film compound is no longer specified in military packaging where removal is a necessity, it is interesting to note that use of this material *on precision parts* is still the practice of some manufacturers in their commercial export processing. The Navy has pioneered the use of preservatives that can be easily removed, as note its almost universal use of solvent-cutback, soft-film compounds ("P-2" of MIL-P-116A) for the protection of metal surfaces.

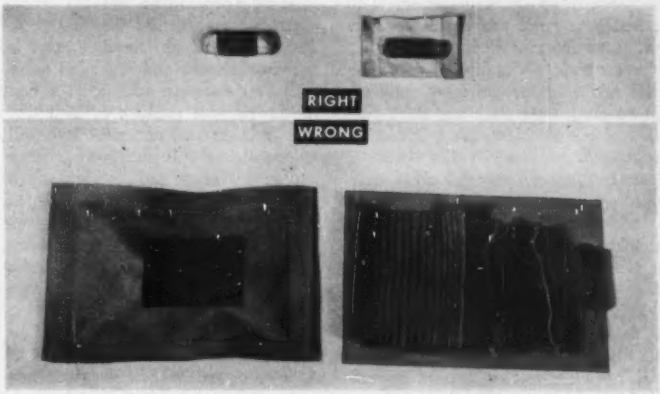
At one time Method II, or dehydrated packaging, was considered to be the epitome in ease of depreservation. "Keep your powder dry" and deterioration will not take place was the belief, no depreservation will be necessary and all the ultimate user need do is break the package for immediate use of the item. This is fine, except that constant vigilance, a condition difficult to obtain, is required. The desiccant in the package constantly attracts water-vapor and in a year or two has absorbed all it can hold; from then on there is no protection. So "cycling" is a critical process—humidity indicators or time limits must be watched, the package opened, desiccant replaced and the package resealed. When a large amount of material is involved, this can be a time- and money-consuming operation. So Method II today is ordinarily indicated only when no other adequate method of preservation can be accomplished.

Another material which gives promise of corrosion protection with simple or no depreservation required is the volatile corrosion inhibitor, such as VPI and Vapor-Wrapper. There are, however, two difficulties in the way of using this material in military applications: (1) there is no simple

PALLETIZED EQUIPMENT bound by wire strapping at Acorn Training Detachment, Port Hueneme, Calif., is strong, with minimum bulk and weight.

PHOTO COURTESY CONTINENTAL CAN CO.

NEW-TYPE CONTAINER developed for Navy Bureau of Ordnance for packaging flares, fuses and similar items has advantage of easy, effective resealing. Threaded cover has pressure dome and rubber gasket. Flush interior side walls assure no waste of space.



NEEDLESS BULK adds up to wasted dollars, particularly in storage. Both these packages (complete at left, components at right) meet Method IA-8 requirements—but note difference in size. The smaller package makes use of cloth-backed-foil barrier material, moldable to contour of item.

MINIMUM CUBAGE is essential when urgently needed military supplies must be delivered by airplane to a carrier operating in enemy waters.

method of determining the continuing activity of the coated papers and (2) not enough authorized information is available concerning methods of use and effectiveness. One thing does seem to be certain: In military use the inhibitor papers are going to be sealed along with the item in vaporproof containers in order to retain the vapor as long as possible.

Containers, too, must be designed for ease of opening. If sealed cans are used, they should be provided with an opening strip or other device; it is well to think of the man in the field who may have to hack away if he does not have a can opener handy. If there is no opening device, is it possible to open the container in a primitive manner without damaging the contents? Wax-dipped jobs are also notorious for the mess involved in opening. Here, too, will the insertion of a knife blade get to the item contained?

It is certainly only logical that if opening or removal of the package is not foolproof, special instructions should be given on the outside of the container, as it cannot be expected that every GI or civilian employee will be familiar with the intricacies of a particular package. Our ultimate consumers are just people and if special opening devices and/or special instructions are needed for opening cereal boxes, soap-powder containers and similar household items, how much more are such instructions needed for military users who often must open the packages under hazardous or difficult conditions?

4. *Is the finished package of minimum practicable size consistent with protection required?*

In examining military packages of all kinds, made by both military organizations and contractors, including packaging companies, the only conclusion that can be reached is that this question is not considered at all. Yet in any military operation space is at a premium, whether that operation be simply warehousing or an all-out combat mission. The oversized, overstuffed, awkward, bulky packages that are prepared as "military" packages create enormous shipping problems, tremendous requirements in warehouse space and expanded transportation costs. In addition, the cost of the original package is high due to the labor and materials involved.

The answer still is: a good package is a good package and not a makeshift. Good design and proper planning, as well as imaginative use of required materials are the only means by which the simplest effective packages can be created. Necessary protection, yes. But we must eliminate the protection on *top* of protection in *more* protection. Let's be realistic and take pains to keep down size and weight. They are costly in preparation and costly to transport and store.

5. *Will the package stand up under severe handling?*

To some, this question will seem to be the antithesis of the one immediately preceding. Actually, in practice, the "tight" minimum-sized package, properly constructed, will hold up under conditions far worse than the bulky package will withstand. Cushioning, improperly applied, can contribute to the destruction of a container. What is needed is support—internal support for the package surfaces. Too often while protection given to the item is overdone, protection of the container is ignored. And once the container is damaged or destroyed, all is lost. If a package is properly designed, it will take considerable rough handling before failure.

6. *Can the contents of the package be easily identified without destroying the integrity of the protection?*

Now that we have a military standard for marking (MIL-STD-129) with a rather detailed explanation of the exact markings required, this should cease to be a problem. In the military set-up, the stock number is the prime identification and now that it is required as the first thing seen, the work of the storage people, as well as the users, should be greatly simplified.

Where trouble does arise, however, is in multiple packs, where a quantity of the item is included in one sealed package. The package itself may be well marked, but the items are generally issued one at a time; with each issue, some identification must be prepared to accompany the item, an operation that can be time consuming. In fact, many of the requirements for individual packaging stem not from the necessity for protection, but from the need for good identification. To alleviate this condition, some defense agencies specify that each item be stamped or otherwise marked with the identifying number. Another solution lies in affixing a small pressure-sensitive label, printed with the number on the part or wrapper prior to sealing a multiple in the container.

Keep this in mind: except for common hardware and other readily identified items, an unidentified item is a liability and is usually as worthless as no item at all. Millions of dollars worth of unmarked and unidentifiable military supplies have, in the past, been disposed of; it would be most unfortunate indeed should this experience be repeated. This, too, is another argument for keeping the size of the package down to a minimum,

(This article continued on page 206)

A brand-new Smith

DESIGN FOR SMITH BROTHERS' NEW CHLOROPHYLL COUGH-DROP PACKAGE IS THE MOST RADICAL DEPARTURE IN FIRM'S 105-YEAR HISTORY

TRADE AND MARK have been moved to lower half of package to make room for names of new ingredients. Counter units provide smaller display for locations other than candy counter for new medicated product.

For a very helpful example of the kind of "inside" details to be watched in planning a package for a new product by one of the country's most conservative packagers, MODERN PACKAGING is indebted to Smith Brothers, Poughkeepsie, N.Y., in connection with their "New Medicated Menthol Cough Drops with Chlorophyll" on the market this month.

On two scores, the new package is a momentous departure from tradition: (1) priced at 10 cents, it is the first time in Smith Brothers' 105-year history that the firm has deviated from a 5-cent product and (2) it is the first time that "Trade" and "Mark" have been given subordinate places on the lower half of the package face below the product name.*

"The reason for these changes are quickly apparent on examination of the package," says L. M. Shaw, sales and advertising manager. To get the words "Menthol with Chlorophyll" (the popular new ingredient to stop bad breath) along with the copy "New Medicated" in a prominent position, there was no alternative but to lower the famous illustrations. One glance at the package, however, shows that even with this change there is no loss in the century-old identity of the two bearded brothers.

In size, the new package is identical to the 5-cent Smith Brothers Cough Drop packages. The conspicuous printing of the 10-cent price in red on the front panel is thus based on sound reasoning and the company's knowledge of the recent experience of others. A chewing-gum manufacturer included chlorophyll in his formula and priced the product at 15 cents. His neglect to conspicuously price the product on the front panel resulted in much confusion. Consumers, accustomed to buying this manufacturer's gum for 5 cents, presumed that the new package also was 5 cents. As a consequence there were many disappointments and lost sales, as well as retailer dissatisfaction.

Smith Brothers have aimed to eliminate such confusion from the start by printing price in a conspicuous place. Other distinguishing features of the new package are the use of green to suggest the chlorophyll ingredient as well as a green cellophane tearing tape in contrast to the red cellophane tape on the other cough-drop packages.

New merchandising procedures for the Menthol Cough Drops with Chlorophyll have also been recognized in the planning of the packaging. In contrast to the counter packs of 20s for the regular 5-cent drops, the new packages are packed 12 to a small counter display carton—two of which are waxed-paper wrapped to sell as a unit of 24 packages. By this method of packing, the dealer has a smaller display carton—9 sq. in. instead of 12 sq. in.—more like those used for over-the-counter drugs and thus more suitable for locations other than candy counters where Smith Brothers Cough Drops are traditionally sold. A tab on the carton forms a header piece.

These units of 24s are cased 16 to the shipping case. By this unit planning, the company has been able to pack the new product with no adjustment to case sealers and without any change of warehousing procedure, pallets or conveying equipment. The same-size cases can be used interchangeably for the new packs of 16s and 10-40s of the regular Smith Brothers Cough Drop packages. Thus the company has been able to streamline its packaging operations of the new product.

CREDITS: *Cartons, Fort Orange Paper Co., Castleton-on-Hudson, N. Y. Waxed paper wraps, Nashua Corp., Nashua, N. H., Cellophane wraps, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. Tearing tape, The Dobeckmun Co., 3301 Monroe Ave., Cleveland 13, Ohio.*

*See "Smith Brothers Cough Drops," *Packaging's Hall of Fame*, MODERN PACKAGING, Nov., 1949, p. 94.

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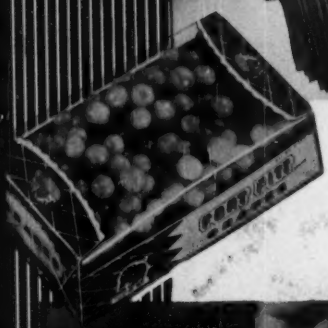


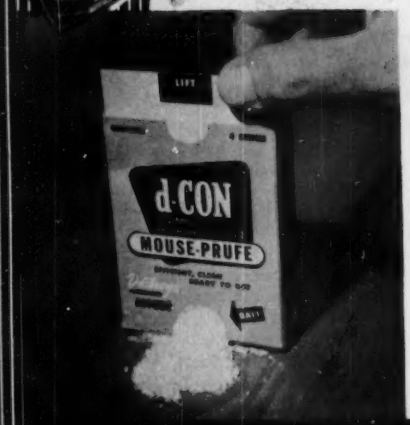
3

PACKAGING

1 Transparent tubes of extruded cellulose acetate butyrate make sturdy visibility packages for Synthetic Plastic Sales Co.'s new Tooba plastic poker chips, counters and checkers. Tubes have telescope tops and glued-in bottoms applied automatically. Trade identification is printed on the tape. Clear plastic shows off colors for good mass display and customers like the re-usable container for easy-to-lose chips.

2 Jayvee Brand, Inc., wanted this display package for use in baby-goods departments of drug stores. The product is Nancy Didee Pants, ". . . the original pin-free diaper cover." Transparent re-usable polyethylene envelopes are printed in red, blue and white with illustrations in front and directions for use on back. Package, Dobeckmun Co., Cleveland.

3 Perishable grapes get special protection from a double-reinforced bottom and triple-thick ends in this transparent-wrapped grape tray for Fort Pitt Tomato Co. Tray holds 1½ lbs., fits 12 trays to a normal grape lug. Prepackaging avoids former heavy loose-grape loss, pleases customers with fresher-looking, fly-free fruit. Trays, Standard Folding Tray Corp., Brooklyn, N.Y.



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4 The d-Con Co., Inc., says this package is "convenient for customer and mouse alike." To serve a mouse a fatal meal, the user removes tab in carton front, then lifts the insertion board that serves as a reclosable gate for the hole. Dispensing counter displays are provided for this package and for a larger three-way-feed unit. Packages and displays, W. C. Ritchie & Co., Chicago.

5

5 A departure from the conventional in salad-dressing packaging is a series of ceramic-fired decorated tumblers for American Food Co.'s Chef's Pride mayonnaise with a gay nineties design and lithographed snap-on cap. Display card stresses re-use value and urges customers to "start a set." Container, Hazel-Atlas Glass Co., Wheeling, W. Va. Closure, Swan Metal Cap Co., Inc., Chicago, Ill.

6 Ready-rolled frozen pie crust in a heat-sealed cellophane bag is the latest consumer convenience in Frozen-Rite Products' line of frozen baked goods. Each bag

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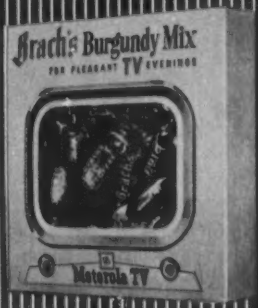

PAGEANT

contains two frozen 9-in. crusts, ready to defrost and bake, reported to keep indefinitely under refrigeration. Directions for use, plus pie-filling recipes, are on back of package. Bags, Milprint, Inc., Milwaukee.

7 A 48-oz. handy-grip refrigerator bottle is the re-use container for Ray Vegetable Oil Co.'s Ravo, a new high-quality peanut oil for home use. Label is red-on-white and has small panel calling attention to container's usefulness. Bottles and closures, Owens-Illinois Glass Co., Toledo, Ohio. Labels, Commercial Printers, Inc., Columbus, Ga.

8 A thorough job of promotional tying-in has been done by E. J. Brach & Sons in their package design for Burgundy Mix candy. The window box is die cut and printed to look like a Motorola TV set, with colorful circus cut-outs on the back for the kids. Motorola shares part of promotion costs, also provides real TV sets for Brach dealers' displays.

9 Combining the "economy half-gallon" idea with the convenience of quart containers, Purity Maid Products is using this twin-quart package. The half-gallon unit consists simply of two suitably printed standard quart containers combined by a simple adhesive operation prior to casing. A knife blade slipped between will separate the two. Cartons, Sealright Co., Inc., Fulton, N.Y.

10 Unusually successful results are reported for this peanut package used for television promotion by Kroger Grocery & Baking Co. The thin-blown glass tumbler has a snap-on cap plus a sealer band which carries the only package copy. It is suggested for re-use as a glass for beer. Tumbler, Federal Container Corp., Minneapolis. Cap, Sterling Seal Co., Erie, Pa. Sealer band, Celon Co., Madison, Wis.

11 To protect this household desiccant unit from soaking up moisture before use in closet, basement or tool box, Drierpac Co., Inc., packages its desiccant-filled fabric bag in a sealed envelope of foil laminated to gravure-printed cellophane. Black letters and light-blue highlights make contrast against the foil background. Bags, Shellmar Products Corp., Mt. Vernon, Ohio.

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Pulling as a team

THOMAS' FAMOUS COACH-AND-FOUR PROVIDES A UNIFYING TRADEMARK IN COORDINATION AND CLEAN-UP OF DIVERSE LINE OF BAKED GOODS

The career of S. B. Thomas, Inc., prominent specialty baker in the New York City area, extends back to 1880, going considerably beyond the era of modern packaging techniques in the merchandising of bakery products.

The development of packaging in this company has been typical of the old established bakers in that it has come bit by bit, rather than as one complete, integrated program. How Thomas has gone about picking up the loose ends and instituting a coordinated plan now provides an interesting, if perfectly typical, example of packaging improvement.

In its early days the Thomas company, like the wholesale bakers, sold its breads and muffins unwrapped. But it was among the first to adopt packaging, having begun to wrap bread in 1896 and English muffins in 1916. As time went on, waxed wrappers and bands, end seals, cellophane and ingenious new carton ideas were adopted. Each of the designs was prepared by the manufacturer who got the original order for packaging material. This resulted in a variety of styles of lettering and other inconsistencies.

It was decided to call in an independent designer to study the problem of improving the packages and bringing them into a single family. A package committee was set up and meetings were held at frequent intervals to examine and discuss each step in the program as work progressed.

The main objectives were concerned with surface design: to give greater eye appeal, to give instantly recognizable design characteristics, stronger display and "carrying power" to meet the new demands of present self-service trends in retail-food selling.

Before work could be started on actual designs for the individual packages it was necessary to establish a dominant theme, basic motifs and color policy.

The designer's first step was to conduct a survey in several typical sections served by the company, questioning retail-store operators as well as consumers.

One interesting bit of knowledge gleaned from the survey helped to determine the choice of a basic symbol, or identifying mark.

The wrapper for English muffins, one of Thomas' best-known products, had always carried an illustration of a coach-and-four with an inn. The designer felt that the coach-and-four was worth considering for use on all Thomas' packages; that its perky silhouette would appeal to the average person and be remembered. As a test, to help determine its value for this purpose, an enlarged photostat print was made of the coach-and-four alone, without any of the other parts of the wrapper design included. This was shown to housewives who were asked to identify it.

Although few could recall the exact product, a surprising number remembered it as associated with "some kind of bakery goods" and an even larger percentage recalled it in connection with some sort of food package.

Considering the fact that this picture had been displayed on only one of the several Thomas' products, the results of this part of the survey were very encouraging. The symbol was adopted without further hesitation.

The study was helpful in determining the best course on other matters, too. For example: the designer had felt that a particular color in use on one of the packages was a poor one for bakery products and should be replaced. The results of the survey showed that such a change would surely result in a loss of sales in certain sections which enjoyed a good business on this product. In these sections, many foreigners who could neither read nor write English identified the product only by the color. Instead of discarding the color completely, the company decided merely to adjust it to brighter and more appetizing hue.

On many of the packages a livelier, more colorful effect was attained by using a dark shade of blue in place of black.

An important and carefully considered operation was performed on the display lettering of all the designs. It was decided to repalce the highlighted logo and the old English used for much of the other display, with a type style

NEW END LABELS provide attractive appearance as well as quick identification when the loaves are stacked on the grocer's shelves.

less dated and easier to read. A bold sans serif letter based on the well-known Lydian type face was selected after testing of several letter forms. This style retains some of the feeling of the old English, but is much easier to read.

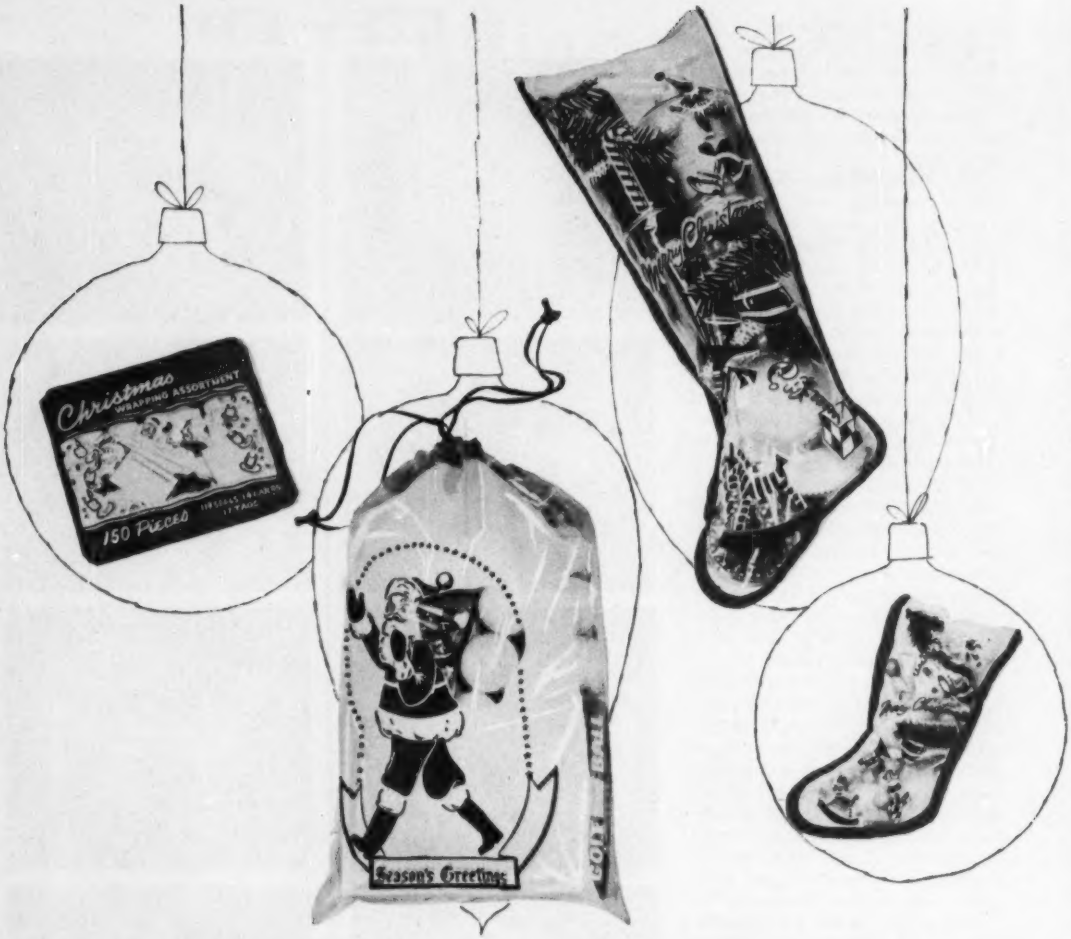
The initial "T" was adopted as a sort of secondary motif for use on wrappers and cartons having large areas of space which would lend themselves to all-over or repeat patterns. The Thomas' English Raisin, 100% Whole Wheat and Date-Nut wrappers carry variations on this design theme.

On Thomas' Bread, the end-seals are of a less squarish shape than those used on most breads. Contrary to usual practice, the background color on the Thomas labels, instead of covering the entire surface, stops about one-eighth of an inch from the edge, leaving a white margin or border. This accentuates the distinctive label shape. The end-seal shape was interestingly incorporated into designs for the Corn Muffins window carton and the Date-Nut loaf wrapper, where it serves as an additional device to help tie these packages into the Thomas family.

The change-over from old designs to new was made gradually. First, new end seals displaying the coach-and-four symbol and new-style lettering were introduced on most of the breads. Then, one by one, changes were made on wrappers. On many of the breads, the coach-and-four was added to the old wrapper design. After several months, such "interim" wrappers were replaced with the final versions.

The change-over was effected with no apparent loss of consumer recognition, demonstrating the wisdom of picking up an established design motif from somewhere in the line to serve as a coordinating family link.

CREDITS: *Design, William R. Nielsen, 474 W. 238th St., New York. Waxed wraps. Henle Wax Paper Mfg. Co., Inc., 1428 Longfellow Ave., New York 59; Kalamazoo Vegetable Parchment Co., Parchment, Mich.; Marathon Corp., Menasha, Wis.; Newark Paraffine & Parchment Paper Co., 50 Jelliff Ave., Newark 8, N. J., and Badger Paper Mills, Inc., Peshtigo, Wis. Printed cellophane wraps, Forbes Lithograph Mfg. Co., P. O. Box 513, Boston 2, and Cellu-Craft Products Corp., 133-23 35th Ave., Flushing, N. Y. Combination wrappers, Milprint Inc., 4200 N. Holton St., Milwaukee 1, Wis., and Newark Paraffine & Parchment Paper Co. Labels, Marathon Corp. Window cartons, Associated Folding Box Co., 24 Binford St., Boston 10.*



MAKE YOUR PLIOFILM PACKAGES

HERE'S a smart new way to boost your holiday sales: Give your product a gift-wrapped look by using PLIOFILM bags printed with gay Christmas colors and patterns. PLIOFILM is velvety soft—with a touch that registers quality, and its natural transparency will display your product in true color and form.

You'll do more than build sales appeal. You'll give every package the benefit of PLIOFILM's strength, toughness and superb moisture protection.

PLIOFILM is so strong, breakage and rewraps are virtually eliminated. So moisture-tight, it preserves quality for long periods. It's adaptable to all types of machine packaging—heat-seals readily with hand tools in packaging at store level.

Write the Goodyear Packaging Engineer for help in designing a PLIOFILM Christmas package—or for help on any packaging problem. Address: Goodyear, Pliofilm Department, Akron 16, Ohio.

SAY "MERRY CHRISTMAS"

COULD YOU USE THESE PLIOFILM ADVANTAGES?

IT'S STRONG!
Produce bags hold up to 10 pounds without danger of breakage.

IT'S LIQUIDPROOF!
So moisture-tight, leakage-proof, it safely seals pickles, sauerkraut, in their own flavor-making brine.

IT KEEPS MOISTURE OUT!
Crackers, tablets and other hygroscopic products stay crisp and dry in PLIOFILM.

Good things are better in *Pliofilm*

GOODYEAR PACKAGING FILM

3-way protection against air, moisture, liquids

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

LUCKY PIECE added extra promotional interest during introduction. Coin is held in place by ribbon secured by gold-colored "seals of authorization."

MORE SWEDISH THAN SWEDEN, these labels are designed for enamel made in U. S. under license from Stockholm firm. Poster styling, multicolor lettering, Swedish copy express pride in Swedish formula.

Proud label

MASURY BACKS ITS SWEDISH-FORMULA ENAMEL WITH SVENSK LABEL FESTOONED WITH ACTUAL 'GOLD' COIN

Among the makers of industrial and trade products there is a growing awareness that the industrial buyer, the contractor's purchasing agent and the tradesman are just as susceptible to package appearance as the consumers of household products. The result has been an increasing application in this field of package labeling techniques with the kind of eye appeal, strong brand identity and adequate informative data which closely approximate the packaging used to attract sales in other lines.

One striking and notably successful example of attention-getting packaging for a commercial product may be seen in the colorful labels developed by John Masury & Son, Inc., Baltimore, for three new paint products. One of these is a Swedish white enamel which the company is licensed to manufacture and sell in the U. S. The others are a special paint-reinforcing oil and a non-tarnishing varnish developed in the Masury laboratories.

Like the company's full line of house and general-purpose paints, the three new items are distributed through trade channels and the principal users are painters and painting contractors. The labels for the new items, however, were designed with the same care and ingenuity that would normally be lavished on containers for cosmetic items.

The most unusual of Masury's new labels is that for Emalj, a non-yellowing white enamel that the company makes under an exclusive licensing agreement with M. Gentele & Co., Stockholm. The traditional excellence of Swedish enamels is fairly well known in the trade, but it was decided to hammer the point home by use of a label that left no room for doubt. Obvious pride in the Swedish origin of the product, expressed in the label, would do that, it was felt, and the company started looking for things that were "typically Swedish" to use in the design.

Swedish paint can labels themselves proved to be of little inspirational help, but a study of Swedish travel posters and books provided the necessary ideas. The Gentele firm's house-organ staff suggested the poster-style lettering for "Emalj" in yellow, red, white, green and orange on a deep royal blue ground and the idea for the traditional stylized fig-

ures of native Swedish painters came from a Swedish book in a Baltimore public library. The wrap-around label was lettered with a combination of Swedish and English, so that the initial impression is that of an import, but the words "interior, exterior" appear on the main white copy panel and a small white square at the lower left gives in English the explanatory "non-yellowing, white enamel" description together with product designations: "gloss," "semi-gloss" or "dull." Instructions for use appear on a white back panel, first in Swedish, in blue, and then in English, in red. The little painter figures appear again on this back panel.

Masury was admittedly a bit skeptical about the reception of the "Swedish" package in the beginning. They were sure of the many painters of Swedish background, but not of how the rest of the market would take it. The firm decided to add one last fillip to the package during the introductory period. A Swedish "gold" lucky coin, die pressed on one side with the company's theme—"Masury is good paint"—and "Carry me—lucky be" on the reverse, along with the figure of the native Swedish painter, was suspended by a length of red ribbon to the front panel. It was held in place by two gold-colored foil seals —"seals of authorization" bearing the Swedish three-crown royal insignia.

The novelty of the good-luck charms brought the quick attention to shelved displays of the new cans that got the product off to a good start.

And the Swedish painters and contractors were not the only ones who liked it. Others from Maine to Florida tried it and ordered, resulting in steady sales which have surpassed even the most hopeful expectations. An instance of employees pilfering a number of the coins in a distributor's warehouse was turned into a publicity release.

Having successfully broken out of routine with the Emalj labels, Masury decided to by-pass its general-line label again for another new product, Masur Oil. This laboratory-developed product, a mixture of natural oils and synthetic resins, proved to have an astonishingly wide range of potential uses—a sealer for wood, a waterproofer, a rust preventive, a reinforcing oil for paint. Getting all this across on a label seemed impossible.

The answer came during predistribution promotional activities for Masur Oil. A visiting scientist was photographed at the company's laboratories with two of the company's research men and the photo was used with a trade press release. This picture, with its suggestion of scientific discovery, seemed to fit in so well with the product's background that a re-posed version of the photo was put right on the label—an unusual example of photography on a lithographed paint can.

The front and back panels of the square Masur Oil can, which are alike, are designed to resemble in a three-dimensional manner a page from a medieval alchemist's notebook. Copy accompanying the black and white photo on a white background is of institutional advertising type, stressing the research that went into the product's development. Instructions for use and a lengthy list of possible applications appear on side panels. The remainder of the can is lithographed in red with gold trim. For future use, the company has already received a proof of the label with the photo of the scientists printed in three colors. Masury is convinced this color printing will be worth the cost.

Paintmakers traditionally package varnishes in a style different from that used for paints. Thus, it is no surprise to find Masury's new Cosmo Spar varnish in a lithographed jet-black square can trimmed with gold. A brick-red shield bears the Masury name and slogan. Below this is a list of uses. Overlapping the large shield is another shield-shaped area in which drawings of a steaming percolator and a cocktail glass symbolize the resistance of the varnish to hot liquids and alcohol.

A highly successful Masury trade promotional stunt for Cosmo Spar has been a demonstration in which the famous movie horse, Nugget, star of "Killer Stallion," prances around on a panel of Cosmo-varnished flooring to prove that his hooves can't break the tough varnish film. At some future date, Masury hopes to redesign the Cosmo Spar label to include a picture of Nugget standing on a floor panel.

CREDITS: *Cans, American Can Co., 100 Park Ave., New York 17. Paper labels, The Foreman-Pierson Press, 205 E. Lombard St., Baltimore 2, Md. Gold seals, French-Bray Printing Co., Candler Bldg., Baltimore 2, Md. Lucky coins, Osborne Coinage Co., Cincinnati 25, Ohio. Lithographed cans for Masur Oil and Cosmo Spar, American Can Co.*

PHOTOGRAPHIC reproduction on this lithographed can showing three chemists conveys idea of scientifically developed product with multiple uses. The illustration, now black and white, will soon appear in three colors.

BLACK AND GOLD can differentiates Masury Cosmo Spar varnish from general-line products. It may be redesigned soon to remind users of Masury's effective publicity stunt in which a horse failed to damage a Cosmo Spar varnished floor surface.

REGULAR LINE of Masury labels employs "color guard" theme in red, gray, black and white.

PACKAGED UNITS are mounted for display on this large easel display card calling attention to re-use features.

Gift-ties

ORNAMENTS made from the packages are shown in Christmas tree. Hand benders are cut in shape of stars. Bolt flanges become shining decorative disks. Die-cut parts of the backing cards and folders become colorful Christmas wreaths, Santa Clauses, bells, etc.

In presenting its 1952 line of Christmas gift ribbon put-ups for retail selling, Burlington Mills has come up with a highly unusual idea in re-use packaging.

All of the foil and paperboard supplies Burlington is using in the packaging of its gift-tying ribbons this year have been designed so that, instead of going into the wastebasket after the ribbon is removed, each can be turned into a Christmas-tree decoration, party favor or toy.

Calling the new line "Ribbons-Plus," Burlington not only offers an incentive to the shopper to buy Burlington put-ups, but provides retail outlets with a very clever new ribbon-promotion idea.

The re-use features are accomplished by the use of specially planned die-cut constructions and attractively

printed Christmas designs on the foil.

An aluminum foil hank bendover, removed from the hank, can be flattened into a glistening silver star. Backing cards for various assortments of hanks are perforated so that by tearing off the product and brand identification the user has a Christmas bell, a Santa Claus, a holly wreath or a miniature Christmas tree. One folder becomes a Christmas boot suitable for holding a small gift. Bolt flanges become shining foil disks for the tree. A backing card of foil laminated to paperboard for an assortment of hanks and cone-decorated bows is die cut with notches that serve not only to hold the product elements securely in the package, but to form the card into a child's party hat when the items are removed.

The illustration on the opposite page shows how each of the packaged pieces is converted into a Christmas tree decoration and also suggests how a store itself might decorate a tree with the package pieces as part of its counter promotion of Ribbons-Plus if desired.

Cartons are also planned with plus features. One is called Santa's House, made with a gabled top to form a roof and printed to give the effect of red brick. Another box has a Santa mask printed on the back, which the child may cut out. Another box is printed to resemble a sleigh complete with a punched tab for tying a string to form a pull toy.

To help merchandise Ribbons-Plus, Burlington is offering stores without charge a large easel window or counter display card fully mounted with the actual packaged units ready for display. The top piece on the card calls attention to the novel packaging: "Ribbons-Plus—full value in gift tyings—plus decorative ornaments at no extra cost."

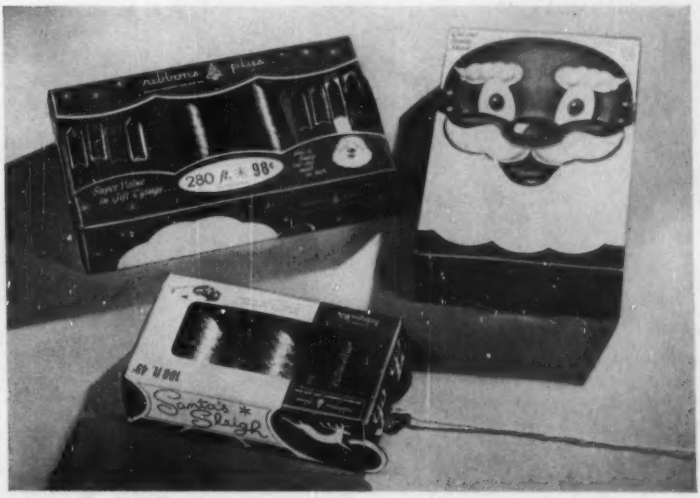
The display card, itself, measuring about 2 by 3 ft. over-all, is made with a center fold, which when opened contains a pop-up Christmas tree of tissue paper, similar in construction to the popular decorative paper Christmas bells and trees. The card holds 16 different ribbon put-ups, each clearly identified and price marked, which makes for easy customer selection. The display card is varnished red paperboard printed in white, while the Christmas tree is green paper with a red base. The top piece is white printed in red and green. The display piece and all the packaged put-ups are clearly identified with the name of the manufacturer by the printing in a conspicuous spot on each, "A product of Burlington Mills."

Salesmen on the road with the new put-ups during the summer months reported wide interest in this new idea among store buyers. They not only welcomed the new selling appeal of the re-use feature, but were enthusiastic about the attractiveness of the assortment of units priced to retail from 10 cents to a dollar.

CREDITS: *Design, Alan Dale Bogorad, 119 W. 57th St., New York. Foil cards, Diamond Printing & Label Mfg. Co., 1045 Frankford Ave., Philadelphia 22, Pa., and Paper & Corrugated Specialties Co., 414 N. 13th St., Philadelphia, Pa. Hank benders, United Engraving Works, Inc., 150 W. 22nd St., New York, and Diamond Printing & Label Mfg. Co. Cartons, Shuttleworth Carton Co., 474 W. Broadway, New York, and Paper & Corrugated Specialties Co. Printed cellophane, Kleerwrap, Inc., Mundelein, Ill.*

plus

BURLINGTON MILLS TURNS THE ORDINARILY DISCARDED BITS OF FOIL AND PAPERBOARD ON RIBBON PACKAGES INTO RE-USE CHRISTMAS-TREE DECORATIONS

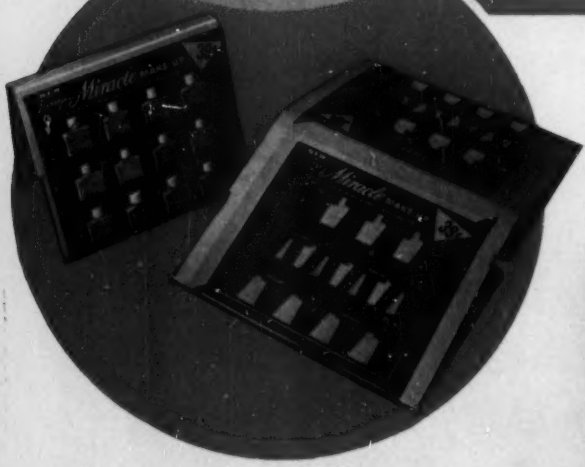


BOXED ASSORTMENTS are also reusable as toys. The back of one is a Santa Claus mask cut-out. Another becomes pull-toy sled with the addition of string tied to perforated slot.

Capitol phonograph records in this new three-dimensional, cleverly angled paperboard merchandiser offer customer convenience in selecting titles. Packaged records fit into the two sections of the unit. The colorful, eye-appealing display is reportedly setting new records in sales. In addition to this unit for hillbilly records, there are two others—one for popular music and one for children's records. Display, River Raisin Paper Co., Monroe, Mich.

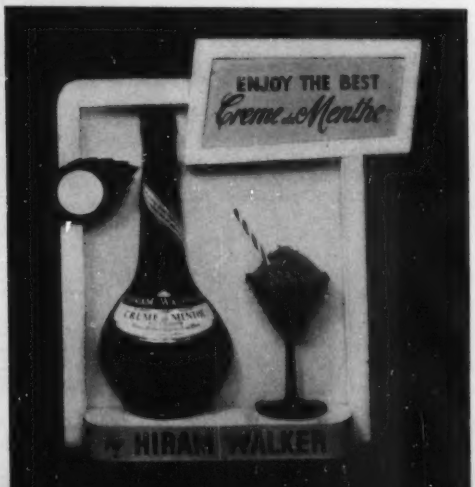
A new bin-type merchandiser developed for Pabst Brewing Co. is the central unit of a beer-food "Picnic Values" promotion in which five other food manufacturers are participating. The unit, topped by interchangeable card inserts, is set up to feature take-home cartons and shipping case for Pabst Blue Ribbon Beer along with Armour's Treet, Campbell's Pork and Beans, Borden's Cheese, Swift's Franks and National Biscuit's Ritz crackers. Display, Gaylord Container Corp., St. Louis, Mo.

DISPLAY



This point-of-purchase display for Tangee Miracle Make-Up is constructed so that the merchandise is readily accessible to customers approaching the counter from either side, thus doubling the unit's effectiveness and making maximum use of counter space. Twelve bottles of the liquid make-up fit into die-cut openings on each side of the display. Printing is in pink, blue, black and maroon on white board. Display, Hinde & Dauch Paper Co., Sandusky, Ohio.

An eye-catching three-dimensional plastic display promotes Hiram Walker & Sons' Creme de Menthe. The basic display is constructed of polystyrene foam. The glass is an actual cocktail glass into which is placed a polystyrene foam replica of a creme de menthe frappe, from which an extruded plastic sipper extends. An actual bottle of Creme de Menthe rests on the unit. Display, Frank Paper Products Corp., Plastics Div., Detroit. Polystyrene plastic, Dow Chemical Co., Midland, Mich.



This full-color counter display card for the new Shulton Stick Colognes is a miniature reproduction of the full-page color advertisements appearing in leading national-distribution magazines. In this way, retail dealers are directly tied in with the company's general publicity. The display features the actual packaged product attached to the unit. The card reproduced at the lower left prominently displays the price of each fragrance—Old Spice and Friendship's Garden. Display, The Warren O. Woodward Co., Long Island City, N. Y.

Junex Products reducing aids now appear on retailer counters in this combination packer and display carton in which six boxes stand on end in a staggered manner to reveal more of each box than is possible with a standard upright display. The carton has a tuck top and quad-lock bottom. Use of the product by both men and women is pointed up by the illustration of a woman in the die-cut back piece and the picture of a man on the front of the carton. Display, W. C. Ritchie & Co., Chicago.

Casting lines for fishermen, an item usually kept under counters, get display position in sporting-goods stores by this sturdy, one-piece, self-service merchandiser for U. S. Line Co.'s products. Constructed with shelves, this printed paperboard display holds a good supply of several different types of packaged casting lines. Display, Consolidated Lithographing Corp., Carle Place, Long Island, N. Y.

GALLERY

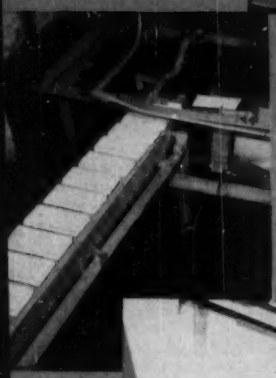
The Smith-Stewart Paper Products Co. floor vendor is designed to boost impulse sales by providing an attractive display setting for its Sm-art Products line of gift wrappings. A step-up shelf and vertical center bin keep merchandise orderly. Showing a complete line in a compact unit such as this aids in building related-item purchases and multiplies sales. Display, Hinde & Dauch Paper Co., Sandusky, Ohio.

From Canada comes this "ice block" display in which a bottle of Dow's Kingsbeer is imbedded. The "ice-block" is a die-formed acrylic plastic unit, the interior of which contains several planes of vinyl sheet to give it a frosted, melting-ice effect. The display requires no sales message, thus eliminating the necessity for French and English text in bilingual Quebec. Display, International Advertising Products Co., Montreal, using Rohm & Haas Plexiglas and Canadian Resins & Chemicals vinyl.

Success of the "Test Desk" counter display inviting customers to test Wearever pens prompted this full-color window display reproducing a life-sized "Test Desk," designed to get window shoppers into the store to make their own Wearever pen test. Some stationers use the unit as a related-item promotion piece, surrounding it with writing paper, etc. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.

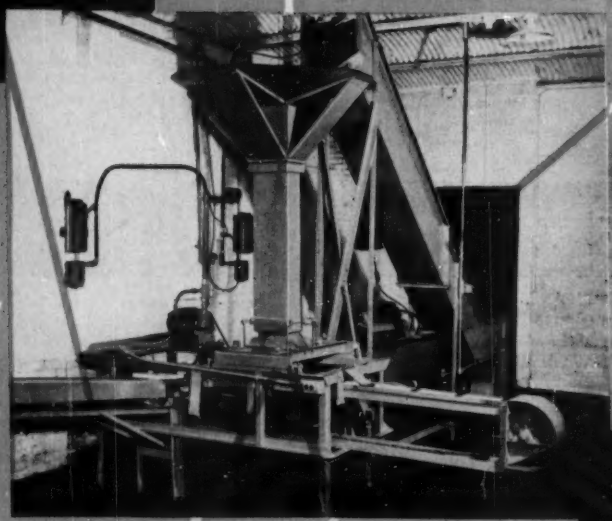
Hard-to-fill

SHALLOW FUNNEL at the top of the stack guides fish.



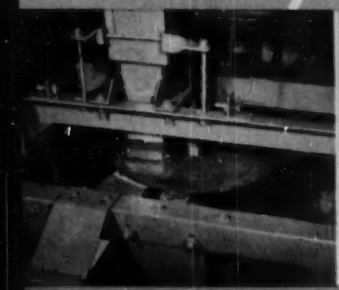
SOLIDLY PACKED blocks of fish in trays leave machine to be overwrapped and frozen. The speed potential is 60 a minute.

INGENIOUS FILLER forms fish fillets into tightly packed column and slices slabs of predetermined weight off bottom into packages passing on conveyor.

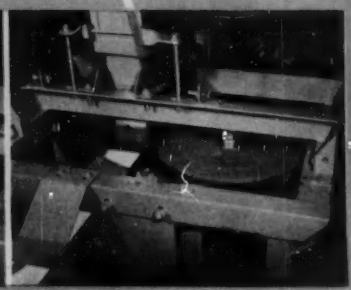


CONVEYOR LIFTS machine-filleted fish from brine bath to the top of the forming stack.

PRESENT HAND FEED of hand-set-up trays is to be replaced by automatic forming and feeding equipment.



SPINNING KNIFE moves in to slice off a slab of the fish flush with top of tray.



KNIFE MOVES BACK, still spinning, while solid column of fish drops into now empty tray that has paused under it.

answer

ATLANTIC COAST FISHERIES' MACHINE TO FEED AND FILL FISH FILLETS SUGGESTS A SOLUTION TO OTHER NON-FREE-FLOWING-PRODUCT PROBLEMS

In the packaging of food products, there is still a large area in which mechanization has made little if any headway. The barrier to completely mechanized and therefore potentially automatic packaging in this area is in the filling-weighing stage. The products are those–like spinach or other leafy greens, cut green beans, hamburger, fish and many cooked foods–which defy handling by conventional filling and weighing equipment because they will not flow.

Solutions to this type of handling problem can take one of two different courses. The product can be hand packed, perhaps with great care to stress the uniformity and separateness of the individual, naturally occuring pieces, or the product can be changed in form by chopping and perhaps the addition of some liquid. Packers of frozen foods to which the addition of juice is usually not possible or desirable are particularly handicapped in development of machine-filling methods.

A recent machine development in a specialized branch of the frozen-food industry offers a clew to the solution of this problem of handling non-flowing food products.

The machine was developed to speed up the packaging of small fish fillets and at first glance seemed capable of application only in this limited field. However, current experiments on a variety of other foods commonly fresh-frozen suggest that the fish-packing machine may have extensive application in the frozen-food field. The machine was developed by Atlantic Coast Fisheries Co. for its Nordic brand fillet packages.

Background of development

The Nordic fillet pack requires some explanation. It was developed by Atlantic Coast Fisheries in 1947, the same year that the company received the Food Industries Achievement Award for its automatic filleting device. The filleting machine had made it possible to fillet small fish such as ocean perch, whiting, etc., at the rate of 200 fillets per minute. Formerly, such plentiful small fish were known as "trash" fish because there was little market for them in the round and hand filleting was too expensive to be practical on such small fish.

Atlantic Coast's filleting machine opened new marketing horizons for the most plentiful and easily caught fish of coastal waters. However, it shortly became apparent that ordinary fish-market methods could not dispose of the potential small-fillet output. They sold better than the small whole fish, but small fillets in assorted sizes are awkward to market, hard to cook (the feathered edges overcook before the center is done) and when frozen they stick together and can't be separated until partly thawed. Consumers prefer larger slabs of fish that can be tossed into a pan while frozen solid with no thawing delay and no portioning problems.

The Nordic pack was based on the idea of pressing a pound of these small fillets into a slab or block of just the right thickness for the frying pan. Wrapped in an attractive foil package, this block of solid fish answered most of the customers' demands. A special feature of the treatment was a quick dip in a special brine solution. This prevented the separate fillet pieces from coming unstuck even when the block was thawed or cooked. From the point of view of the housewife, restaurant operator and retailer, these uniformly sized, shaped and weighed fish blocks–boneless and skinless and of uniform quality–answered a definite demand in the price range. Nordic fillets in this modern form have enjoyed a steady growing popularity since their debut in 1947.

With the success of Nordic fillets established, the packer sought to add speed and efficiency to the packaging operation. Efficient machinery and materials were readily obtained for wrapping the fish blocks in a heat-sealed foil wrapper, but no equipment could be found that would form the fish blocks. So Atlantic Coast Fisheries continued to use its original method, in which operators loaded fillets by hand into a continuous steel tray until a ¾-in.-thick layer was formed. This ribbon of fish was hand cut into 1-lb. lengths and the portion then placed by hand into individual waxed-paper trays which were then cellophane wrapped, foil overwrapped and frozen. This method, although far from automatic, represented a considerable improvement over previously used hand-packing methods for small fillets.

From the point of view of cost and of getting a large catch of fish frozen as quickly as possible, the method still left something to be desired and

COMPONENTS OF PACKAGE are tray and improved laminated-foil wrap with waxed kraft backing which eliminates the problem of sticking to the product. Formerly used cellophane inner wrap has been eliminated.

FROZEN FISH go to market packed 24 one-pound packages to this printed corrugated carton.

the company continued to seek a packaging method that would match in efficiency the company's filleting equipment. Such a machine has now been developed.

Slice off the bottom

Atlantic Coast's new fillet packer can not only turn out uniform blocks of fish fillets at double the speed of the manual line, but it adds a few refinements of its own, including weight control. The complete operation is basically quite simple.

Fillets are first placed on a conveyor which dunks them in brine and then lifts them to the top of a tall, narrow tank. The fillets drop into this tank, which is merely a vertical chamber with cross-section identical to the shape of the trays in which the fish is packed. Once the vertical fish tank is full to the brim, packaging can begin.

At the bottom, the fish tank is open, but the column of fish fillets is held up by a large horizontal, circular knife blade which makes a tight fit against the open bottom of the tank. The fish, piled high in a column, are really supported on the flat side of this spinning knife.

The knife spins just above a conveyor line which brings the waxed trays for filling. As each empty tray arrives and pauses under the column of fish, the ever-spinning knife blade swings to one side. As the knife swings away, the effect is as if the bottom had been removed from the fish tank and the entire column of fish settles ¾ in. into the waxed tray. As soon as the full weight of the column has settled on the tray, the circular knife swings back into its original position, thereby slicing off the bottom ¾ in. of solidly packed fish flush with the rim of the tray and holding up the rest of the column of fish while the conveyor moves another step to position another empty tray under the fish tank. The knife has two motions: it spins like a circular saw blade and it swings back and forth under the column of fish, with a perceptible pause synchronized with the intermittent motion of the tray conveyor.

The conveyor which carries the waxed-paper trays holds them in recesses which make a snug fit at sides and ends so that the trays cannot spread as the solidly packed fish settles into the tray under the filler column. The bottom of the tray, however, is partly supported by the chain which moves the conveyor. Under the knife, at the filling station, this chain is supported by an adjustable idler wheel which can be moved up or down.

This small range of up-or-down adjustment controls fill weight.

Tray size and depth have been set carefully to give 1 lb. of fish when filled flush, with the fish being packed solidly under the weight of the full tank. Different positions of the idler wheel, permitting greater or less bulge of the waxed tray's bottom, vary the capacity of the tray sufficiently to maintain the 1 lb. standard without change-over to a deeper or shallower tray when packaging different types of fish. Densities of the various types of fish are only slightly different and density from catch to catch of a given species is quite uniform.

Predetermined settings for various species are calibrated on the control and the accuracy of pack weight stays well within ¾ oz., the company reports.

The fish packer illustrated here is a pilot model which reflects five years of experimenting by Atlantic Coast Fisheries Co. It has been used on production of close to 1,000,000 lbs. of Nordic fish fillets as a trial run workout. Experimental runs of frenched green beans have been made in recent weeks. The machine, without alteration, processed the vegetables as successfully as it does the fish. Shortly this pilot model will be replaced by an all-stainless-steel model and additional units will be built for the company's three major fish-packing plants in Boston, Nova Scotia and Newfoundland, where at present there are seven lines putting out Nordic 1-lb. packages of cod, haddock, sole, flounder, ocean perch and scallops.

For the pilot operation in Boston an automatic set-up and feed for the waxed folding corner-tuck trays has been ordered and an automatic conveyor transfer is being devised to move the filled trays to the automatic wrapping and sealing machines. This hook-up will allow the packaging line to operate fully automatically at 60 lb. per min. or better. This mechanized line will be able to get into operation without delay whenever a catch arrives, thus trimming to a minimum the time lag between netting the fish and freezing it into Nordic fillets.

In discussing the speed and efficiency of the machine, Lawrence T. Hopkinson, Atlantic Coast Fisheries Co. president, makes a careful comparison. He points out that in a typical 1-lb. cod fillet packing operation, a hand packer fills one carton per minute.

The packer sits before a moving belt carrying fillets which she takes one by one, fits them into a carton, check weighs the filled carton and corrects under or over weight by adding or subtracting small pieces of fish. Filled cartons then go by another belt to wrappers. A 1-lb. package per minute is the industry-accepted standard for this work, with slight variation for type of fish.

In contrast, Atlantic Coast Fisheries Co. has had its improved pilot-model machine operating commercially at an average of 45 packages per minute, a limit set by the ability of a man to feed empty trays into the pockets of the conveyor. The operation also requires a man to feed fillets to the hopper and another to place a sheet of cellophane over the open top of each tray of fish to prevent the tight foil overwrap from sticking. These three men, plus the machine, may be said to perform the same function as packers in a standard hand-packing line—they produce filled-to-weight trays ready for wrapping. By this direct comparison, Mr. Hopkinson estimates that the present pilot machine with three men does the work of 45 hand packers.

The ratio will improve when automatic tray feed is installed and again when the need for a cellophane inner sheet is eliminated.

As a hint of the wider possibilities which may be opened up by the idea behind the fish-fillet packer, Mr. Hopkinson said that a larger unit able to fill four trays simultaneously is on the

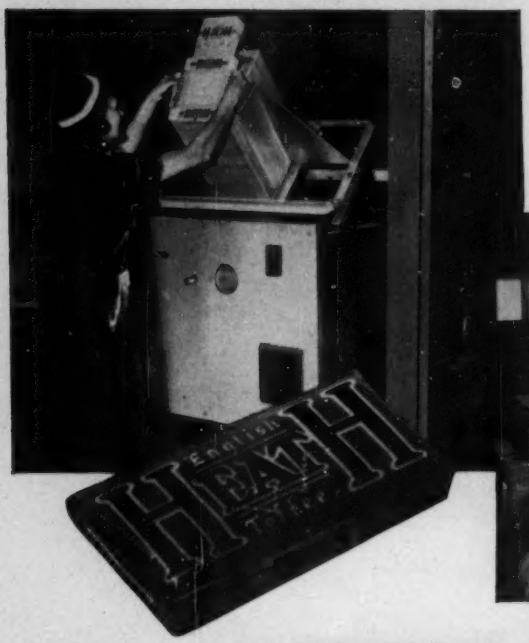
(*This article continued on page 205*)

BURT'S PATENTED PUSH-IN BOTTOMS

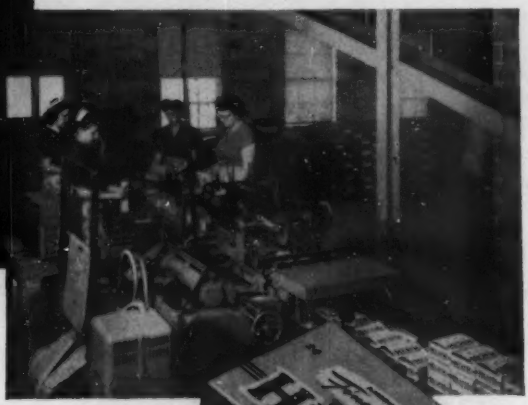
CUT COSTS FOR POWDER PACKAGERS

The all-metal one piece push-in bottom Burt has devised simplifies and speeds the packaging of powder in round set-up boxes. Costly seaming is eliminated by this patented Burt exclusive.

F. N. Burt Company, Inc. · Manufacturers of Small Set-up Boxes, Folding Cartons and Transparent Containers · 600-540 Seneca Street, Buffalo 4, New York · Offices in Principal Cities Or Write Direct · Canadian Division: Dominion Paper Box Co. Ltd., 469-483 King St. W., Toronto, Canada



Model PA Carton Former and (below) Model FA Wrapping Machine in plant of L. S. Heath & Sons, Inc.



An EFFICIENT packaging set-up

Like many other experienced manufacturers, L. S. Heath & Sons, Inc. have chosen PACKAGE machines for every phase of their packaging operations.

Their bars are wrapped on our Model DF-1 machines (not shown in plant picture) which have a speed of 140 bars a minute. Due to a special folding mechanism, these machines produce a neat box-like wrap over the most irregular-shaped bars.

Cartons in which the Heath bars are displayed are produced at lowest cost on our PA Carton Former from economical die-cut blanks. This machine can make up to 102 sturdy cartons a minute, depending on the size and style of the carton. It is easily adjusted for a different size.

To provide utmost protection for Heath bars, the display cartons are finally wrapped on our well-known Model FA machine.

A steadily increasing number of manufacturers are finding that it pays to standardize on PACKAGE machines—for outstanding, sales-winning packages . . . for dependable machine production . . . and lowest operating costs.

No matter what the character of your product may be, it will pay you to check with PACKAGE for the most modern packaging equipment.

Carton as set up for counter display

Write or phone our nearest office

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Progress in resin coating

NEW DATA ON METHODS, WITH A COMPARISON OF PROPERTIES OF SIX DIFFERENT HOT-MELT PLASTIC MATERIALS.

By L. M. Burgess and L. F. Swec*

Packaging relies upon coatings of various kinds to perform many functions and to aid in the fabrication of flexible materials. Coatings are capable of many different single functions as well as combinations of functions, depending upon the composition of the coating, the base to which it is applied and the coating's weight or thickness. The functions of coatings can be decorative, protective or heat sealing, or all or any of the three combined. Packaging is continually searching for higher levels of performance and improved coatings can contribute greatly to this goal by imparting greater heat-seal strength, better durability and better barrier properties.

The ability to make coatings from substantially pure resins applied without solvents or diluents appears to be a major advance in the packaging field and the picture has broadened considerably since the first reports on this subject (1, 2, 3).†

Coating with paraffin is quite old in the converting industry. The early attempts that were made to harden paraffin led into the compounding of "hot melts." These hot melts were composed of resins such as ester gum, plasticizer, wax and a high-polymer material such as ethyl cellulose. The compounds were formulated for the then-existing coating equipment. Because this equipment was suitable only for the coating of low-viscosity materials, the film former was, by necessity, present in small amounts and the plasticizer was present in rather large amounts and served the dual function of dissolving the film former and keeping the viscosity of the melt low. Resins such as ester gum added hardness and mixtures of wax were used in small amounts to prevent blocking and add water-vapor resistance to these melts. The upper limit in viscosity at the coating temperature (approximately 300 deg. F) was about 100 poises.

The weaknesses in this type of melt were many. To begin with, the high percentage of polymer diluent necessary to maintain low coating viscosities resulted in films that were low in strength. This low film strength precluded the use of long-fibred base stocks because of the susceptibility of the film to fibre rupture. In fact, most melts were coated onto glassine, well-hydrated tissues and lacquering papers. The high plasticizer content of the melts made the coated paper very susceptible to blocking.

These melts do, however, have some advantages. They are excellent heat-sealing materials and are still used for this purpose. They also have good water-vapor resistance and, when properly compounded, good grease resistance. These coatings furthermore, can be compounded for high gloss and scuff resistance, a use that still exists.

To the early workers in the field, it was apparent that the lack of film strength was the great weakness of these materials. Therefore, considerable effort and time were devoted to increasing the amount of high polymer in the melt. Most investigators felt that mixtures of high-polymer resin and plasticizer only would be the ideal coating material. The limiting factor on the percentage of high polymer was always the inability of the equipment to handle a highly viscous melt.

Coating methods

The advent of polyethylene quickly changed the picture. Its properties seemed almost ideal as far as a finished coating was concerned. Most important, however, were its high film strength, its relatively low viscosity and the fact that no compounding was necessary for flexibility. The lower molecular weight could be coated on normal waxing equipment. In 1945 Imperial Chemical Industries developed a hot-knife coater on which they were able to produce satisfactory coatings on paper. On this equipment they coated polyethylene resins ranging from those low in molecular weight and melt viscosity to ones as high as

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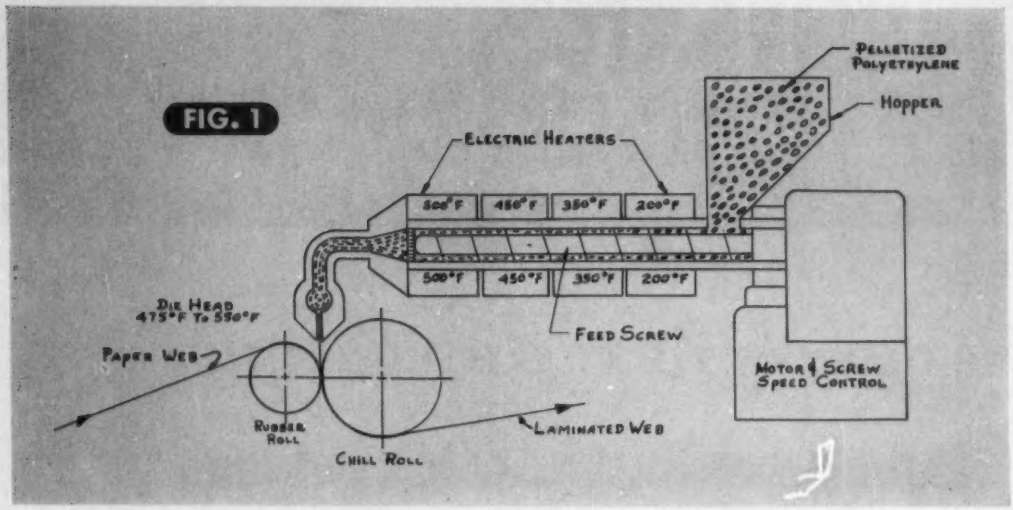
† Numbers in parentheses identify References, appended.



1. TYPICAL EXTRUDER for polyethylene coating is shown in schematic diagram.

20,000 molecular weight with a melt viscosity of at least 10,000 poises.

One problem that existed was melting the resin. All investigators finally agreed that the best method was to use an extruder.

The extruder used for melting a high-polymer material such as polyethylene is merely a long cylindrical barrel in which a screw revolves. A hopper is provided for charging in the resin and a die head is attached at the opposite or delivery end. There are provisions made for heating and cooling. It functions as a melter in this manner: The screw takes the resin fed to it and by mechanically working the resin along the length of the heated barrel it raises its temperature to a point where viscous flow occurs and forces the molten mass through a die head which shapes or forms the material into sheets or rods. Usually the hopper zone is kept cool and the temperature gradually increased along the barrel to a maximum at the die head. The screw is hollow to permit water cooling during operation if necessary. A screen is provided at the end of the barrel to hold back foreign particles in the melted resin. The extruder must be periodically cleaned to remove foreign particles and decomposed or oxidized resin. It is important to chill the extruder rapidly after stopping to prevent decomposition of the resin remaining in the barrel and in the die head.

Fig. 1 is a schematic diagram of a polyethylene extruder.

The molten resin being delivered from the extruder die head may be anywhere in the temperature range of 300 to 600 deg. F. This temperature depends on the viscosity and stability of the resin being extruded. For maximum extruder production usually the stability becomes the limiting factor determining temperature. For example, polyethylene and S-polymer can be delivered at the upper end of the above range without serious decomposition, whereas saran and vinyl copolymers must be extruded at the lower end of the above range.

The molten plastic is then coated on a traveling web, such as paper, by one of two methods.

The *hot-resin-coating method* consists of metering the desired thickness of plastic (in the range of 1 to 10 mils of coating) on the paper by the use of a series of rolls. Viscosities of the molten resin up to 15,000 poises have been successfully run by this method.

The shape of the extruder die head used for resin delivery is relatively unimportant compared with the second method, known as *extrusion lamination*. In this operation a carefully metered film is extruded from an accurately controlled sheet die head. The hot film is stretched in the molten form from its original thickness (that of the die head) to the desired final thickness within a very short distance from the die head. The hot film is applied to the paper between a rubber and metal roll. The pressure between these rolls gives the adhesion of the hot film to the paper.

The primary advantage of the hot-resin-coating method is the good adhesion of coating to backing that can be obtained with any given combination of raw materials. This is important in applications involving heat sealing and as a release sheet from tacky materials.

Although all the plastics discussed below have not been coated by the extrusion-lamination method, it is believed that the hot-resin method will be applicable to a wider variety of plastics and formulations than the extrusion-lamination method. This is based on the fact that forming perfect films from an extruder die head, which films must also be susceptible to hot stretching, is not easily done with some resins.

The advantage of the extrusion-lamination method is that thinner continuous films (down to ½ mil) can be applied; also lighter-weight papers with lower strength can be used because the tension on the traveling web is not so great as in the hot-resin-coating method.

The problem of maintaining coating uniformity across the web is a serious one in both operations, although wide machines have been successfully built for extrusion lamination.

These two types of coated papers

must compete with older, existing methods of applying plastics to paper. These include solvent-coated papers and film lamination to paper with adhesives.

Solvent coating is a more expensive operation because of the solvent used and the drying required. It is difficult to get heavy coatings with this method, but it has the advantage of being able to apply the lightest possible coatings on smooth surfaces with very good adhesion.

Film laminations with adhesives are inherently more expensive also because the cost of film manufactured from the base resin and the adhesive cost are additional to the basic costs of the paper and resin plus the combining operation. In addition, it is difficult to find adhesives for many film laminations which give a good permanent bond.

Coated papers must also compete with unsupported films in some cases. For the same thickness of resin the barrier properties are usually very similar. Unsupported films have the additional properties of clarity and light weight, whereas coated papers have greater strength and rigidity and can usually be printed and heat sealed more readily. There are obviously large separate fields for both unsupported films and coated papers.

Specification and controls

The raw stock used for coating must have rigid specifications in certain respects. Usually a minimum MD tensile strength is required, depending on the severity of the operation. Caliper variation, particularly from one edge of the web to the other, must be avoided as far as possible. The adhesion of the coating depends to a great extent on the nature of the surface of the stock. No satisfactory measurement of this surface which can be related to the adhesion of the coating has been found. However, it is known that a rough, fibre surface gives the best adhesion and also requires more coating to get a continuous film. Usually the surface definition is related to such factors as density, porosity, sizing and type of machine finish. A machine finished sheet with minimum sizing and with a low density and porosity reading usually gives a good bond of the coating to the paper. Mill splices must also be carefully made so they are capable of going through the coating operation.

Specifications on the raw polymers used for coating consist of uniform viscosity, cleanliness, stability for extrusion and small pellets for maximum extrusion rates.

During the coating operation it is very important to have reliable controls which quickly indicate excessive variations as well as the production of an unsatisfactory product. Coating uniformity within an established range is the first item to consider. Usually coating weights of individual samples are checked as often as possible by extraction of the coating with a suitable solvent. Recently it has become possible to install beta ray gauges before and after coating which automatically record the weights on a chart and which can also be moved to scan the web to give the coating weight profile across the web. Although this equipment is quite expensive, it has the obvious advantage of giving a continuous record of a large area of the product. Another instrument that can be incorporated into the coating operation is one which continually measures and records caliper before and after coating.

Another property that must be frequently measured during the operation is freedom from pinholes in the coating. This is usually done by flooding individual samples with a colored liquid that wets the plastic surface, such as turpentine or water containing a wetting agent. It is frequently necessary to set a low maximum on the number of pinholes per unit area and test as many samples as possible during the operation. Studies are now in progress on an automatic refinement of this test using two electrodes, one on each side of the web, with a fixed voltage somewhere between the voltage breakdown of the uncoated stock and that of the coated stock. A counter then records the number of pinholes which permit the current to arc between the electrodes during the operation.

The bond of the coating to the backing must be frequently checked on samples taken during the operation. This is usually done qualitatively with pressure-sensitive tape or in some cases may be done quantitatively on a tensile tester.

Barrier properties

A number of polymers have been tried as paper coatings by the hot-resin or extrusion-lamination technique. At the present time only polyethylene and saran-coated paper made in this manner are being sold commercially. In the following discussion, a group of well-known polymer types are compared for their properties on paper. All the samples were made by the hot-resin-coating technique except the FM6503 nylon, which was coated by extrusion lamination in the E. I. du Pont de Nemours & Co. laboratory in Arlington, N.J. Approximately 2 mils of coating were applied to 45-lb. or 60-lb. natural kraft in the case of all the hot-resin-coated papers and a 1-mil coating of nylon on 45-lb. natural kraft was used for the results on this polymer. In Table I, the six polymers investigated are compared for their yield in a 1-mil average thickness. The yield is inversely proportional to the specific gravity of the polymer. Polyethylene was the lightest and saran the heaviest of those studied.

TABLE I—RESIN COVERAGE FOR COATED PAPERS

Resin	*Specific gravity*	*Lbs./mil/ 3,000 sq. ft. ream*	*Sq. ft./ lb./mil*
1. 19,000 mol. wt. polyethylene	0.92	14.4	209
2. S-50 polymer	0.97	15.1	198
3. FM6503 nylon	1.13	17.6	170
4. Vinyl chloride-acetate copolymer (VGGA-59139)	1.30	20.3	148
5. Cellulose acetate (Tenite I-S-flow)	1.30	20.3	148
6. Saran	1.68	26.2	115

Probably the most important property of plastic-coated papers in the packaging field is their *water and water-vapor resistance*. Water-vapor-transmission rates measured in a General Foods cabinet at 100 deg. F. and 90% relative humidity are usually directly proportional to coating weight for light-weight continuous film coatings. Table II lists the WVTR's and the exact coating weights tested for each polymer in the order of the best to the worst water-vapor barrier. Since the coating thicknesses are not identical in all cases (particularly the 1-mil thickness of nylon), these results should be compared with the coating thickness differences in mind. Even with these adjustments, however, the order would remain the same.

Saran is considered the best water and water-vapor barrier of the poly-

mers studied and cellulose acetate the poorest. Saran, polyethylene and S-polymer are all considered very good water and water-vapor barriers. Vinyl copolymers, nylon and cellulose acetate are considered poor water-vapor barriers, although they are all good liquid-water barriers in the sense of being water insoluble.

The water-resistance test reported in Table II consists of applying a head

TABLE II—WATER AND WATER-VAPOR RESISTANCE OF HOT-RESIN-COATED PAPERS

Resin coating on 45-60# nat. kraft	*WVTR flat & creased @100°F.-90% R.H. (coated side-exposed)*	*Water resistance (MIL-B-117A method)*
1. 46#/ream white pigmented saran X773.1 (1¼ mil coating)	0.10 g./100 sq.in./24 hrs.	Very good 48+ hrs.
2. 29#/ream 19,000 mol. wt. polyethylene (2 mil coating)	0.59 g./100 sq.in./24 hrs.	Very good 48+ hrs.
3. 31#/ream S-50 polymer (2 mil coating)	0.69 g./100 sq.in./24 hrs.	Very good 48+ hrs.
4. 39#/ream vinyl-chloride-acetate copolymer (VGGA-59139) (2 mil coating)	11.2 g./100 sq.in./24 hrs.	Good 48+ hrs.
5. 16#/ream FM6503 nylon (1 mil coating)	24 g./100 sq.in./24 hrs.	Poor App. 1 hr.
6. 35#/ream cellulose acetate (Tenite I-S flow) (1¼ mil coating)	47 g./100 sq.in./24 hrs.	Poor App. 1 hr.

of colored water on the coated surface and observing visible transfer through the coated sheet to a white backing sheet underneath. Since all the coated sheets studied had a continuous, pinhole-free plastic coating, none would permit the transmission of the liquid, colored water within 48 hrs. However, those with a very high WVTR, such as nylon and cellulose acetate, transmitted water-vapor at a fast enough rate to result in observable dampness of the white backing sheet in about one hour.

Since many present-day packaging problems involve handling at low temperatures, the various plastic coatings were compared for *low-temperature flexibility*. The results reported in Table III were obtained by forming a loop (coated side out) with a 3-by-11-in. sample and clipping the two 3-in. ends together. These clipped ends were attached to a horizontal rod extending into the cold chamber. After conditioning at the test temperature, the looped sample was rapidly pulled through a ¾-in. opening between two smooth, fixed, horizontal metal rods. The crease formed by the looped end of the sample passing through the narrow opening was examined carefully for any evidence of cracking. These creases were also checked on the coated side with colored water containing a wetting agent to determine whether the film had been ruptured.

TABLE III—LOW-TEMPERATURE FLEXIBILITY OF HOT-RESIN COATED PAPERS

Resin coating on 45-60# nat. kraft	*Brittle point of folded sheet through ¾" opening (coating out)*
1. 2 mils 19,000 mol. wt. polyethylene	below –65°F.
2. 1 mil FM6503 nylon	–50°F.
3. 2 mils cellulose acetate (Tenite I-S flow)	–45°F.
4. 2 mils vinyl chloride-acetate copolymer (VGGA-59139)	–40°F.
5. 2 mils black pigmented saran T715	–30°F.
6. 2 mils S-50 polymer	–20°F.
7. 2 mils white pigmented saran X773.1	–10°F.

Polyethylene had the best low-temperature flexibility of the polymers tested. It must be remembered that the results obtained with the compounded polymers, such as saran, vinyl copolymer and cellulose acetate, can be materially affected by the compounding ingredients used. The quantity and type of plasticizer especially affects this property. The two types of saran reported illustrate this effect in that the T715 formulation had a higher content of a different plasticizer than the X773.1 formulation. Usually compounding to give a better low-temperature flexibility results in a sacrifice of barrier properties such as WVTR.

Another important property of a plastic-coated paper is the ability of the coated surface to *heat seal* to itself with a strong seam. This permits the manufacture of flat pouches or bags on high-production heat-sealing machines from roll stock, which gives a tight package that cannot be obtained with conventional glued bags. In Table IV the coated papers studied are listed in the order of decreasing heat-seal seam strength, with S-polymer giving the best result. The figure reported for nylon may not be comparable because of the lower coating thickness, although this property is not directly proportional to coating thickness. The heat-sealing temperatures given are for comparative purposes only, since they apply only to one set of conditions on a laboratory bar heat sealer. The variation of pressure and dwell time would give a different set of optimum conditions.

TABLE IV—HEAT-SEALING PROPERTIES OF HOT-RESIN-COATED PAPERS

Resin coating on 45-60# nat. kraft	*Ideal heat sealing temp. @ approx. 30 psi. for 1 second*	*Heat-seal seam strength (lbs./in.)*
1. 2 mils S-50 polymer	375°F.	6.7
2. 2 mils white pigmented saran X773.1	325°F.	4.7
3. 2 mils cellulose acetate (Tenite I-S Flow)	400°F.	4.5
4. 2 mils 19,000 mol. wt. polyethylene	300°F.	3.5
5. 2 mils vinyl chloride-acetate copolymer (VGGA-59139)	400°F.	3.4
6. 1 mil FM 6503 nylon	300°F.	3.0

The *mineral-oil resistance* of these coated papers is important in the packaging of metal parts which have a coating of preservative or lubricating oil. Small trays containing SAE 30 motor oil were made of the various plastic-coated papers and placed in an oven at 160 deg. F. to accelerate the action of the oil on the coating. In Table V it can be seen that all the coatings except polyethylene and S-polymer gave excellent resistance to the oil. The oil dissolved the S-polymer under these conditions. Although the polyethylene was not dissolved, there was slow diffusion of the oil through the polyethylene which visibly stained the kraft paper in about 12 hrs. Even after the paper is stained, however, the polyethylene is capable of holding the oil for a long period of time under these conditions.

In the packaging of some organic materials, the *permeability to gases* such as oxygen and carbon dioxide is

TABLE V—MINERAL-OIL RESISTANCE OF HOT-RESIN-COATED PAPERS

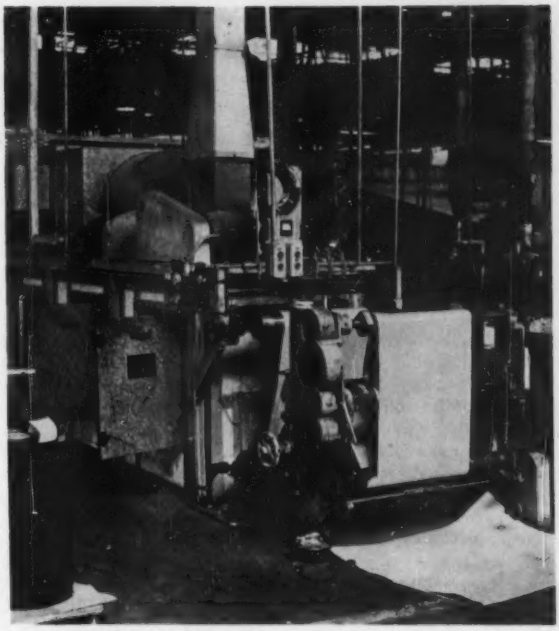
Resin coating on 45-60# nat. kraft	*Resistance to SAE 30 motor oil @ 160 F.*
1. 1 mil FM6503 nylon	Excellent—168+ hrs.
2. 2 mils white pigmented saran X773.1	Excellent—168+ hrs.
3. 2 mils cellulose acetate (Tenite I-S flow	Excellent—168+ hrs.
4. 2 mils vinyl chloride-acetate copolymer (VCGA-59139)	Excellent—168+ hrs.
5. 2 mils 19,000 mol. wt. polyethylene	Fair—approx. 12 hrs.
6. 2 mils S-50 polymer	Poor—approx. 3 hrs.

significant. Of the polymers studied, saran is the best barrier for these gases, giving permeabilities in the range of 0.1 to 0.5 cc./100 sq. in./24 hrs. at room temperature and low relative humidity for a 2-mil coating. Nylon gives permeabilities three to five times as great and S-polymer 50 to 100 times as great. Polyethylene and vinyl copolymers are considered quite poor barriers to oxygen and carbon dioxide.

With regard to general chemical resistance, saran and polyethylene have the greatest solvent resistance. They are not soluble in any solvents at room temperature, although saran is attacked by a few special solvents at high temperatures and polyethylene is dissolved by hydrocarbons and chlorinated hydrocarbons at high temperatures. S-polymer is soluble in hydrocarbons at room temperature. Nylon is quite alcohol soluble, while vinyl copolymers and cellulose acetate are soluble in common ketones and esters. Polyethylene has the best over-all acid and alkali resistance, although S-polymer and saran are quite good in this respect also.

Other backings

In addition to paper, other backing materials such as aluminum foil and cotton or glass fabrics have been used, both in the hot-resin-coating process and the hot-extrusion-lamination process. The latter process has been successful in applying a polyethylene coating to aluminum foil, for example. Although the polyethylene can be separated from the foil, good bond strengths in excess of 1 lb. per in. width have been obtained. This product combines the outstanding barrier properties of aluminum foil and polyethylene. The inert polyethylene coating gives good resistance to moisture as well as to acidic and alkaline materials which tend to attack and corrode aluminum. In rough handling, the development of pinholes in the foil is compensated for by the presence of the flexible waterproof film coating. The coating is heat sealable and heat-sealed bags made from this combination have many desirable properties.



2. COATING MACHINE for coating papers and fabrics with saran.

Cotton fabrics with a wide range of thread counts and weights per yard have been coated with polyethylene and a few with saran by the hot-resin-coating technique. Part of the resin is driven into the interstices between the fibres to give excellent adhesion. In the case of polyethylene, adhesions have been obtained of such magnitude as to make it impossible to separate the coating from the fabric without destroying the coating. These adhesions are known to be as high as 5 lbs. per in. width. To obtain a continuous, pinhole-free coating with such adhesion usually requires 5 mils of coating or more. Experimental runs with glass fabrics have given essentially the same results as above. The saran-coated glass fabric has the advantage of good flameproofness, waterproofness, inertness, as well as dimensional stability.

Cotton fabrics have also been coated by extrusion lamination with polyethylene. In this case thin films, as low as one mil, free of pinholes can be applied to the cloth as to paper. Although the adhesion is satisfactory for many applications, in order to maintain film continuity the coating must remain on the surface of the cloth and it can be removed more easily than the coatings that are discussed above.

Major end uses

The properties of hot-resin-coated papers discussed above indicate the important end uses. Polyethylene-coated paper is used as a waterproof and greaseproof packaging material for metal parts, both as a wrapper and for heat-sealed pouches. These sheets are usually made to meet the requirements of JAN-B-121 and JAN-P-117. Polyethylene-coated papers are also used extensively as locker papers or freezer wraps, as inner liners in multiwall bags and fibreboard drums and as release sheets in contact with tacky

(This article continued on page 212)

Transport trials of paper bags*

BRITISH EXPERIMENT SHOWS CORRELATION WITH DROP TESTS ON FILLED BAGS, BUT NO CORRELATION WITH PAPER-STRENGTH RATINGS.

By R. J. L. Allen† and F. A. Paine**

There appears to be little or no published information on the relation between laboratory tests on the strength of containers and container materials and actual behavior during transport. This is remarkable in view of the technological and economic importance of the subject. In the present experiments paper bags of seven different varieties made from kraft paper lined with greaseproof paper were filled with 7 lbs. of corn starch (powdered) and tested in a series of transport trials, and attempts were made to correlate the results with those obtained in laboratory tests.

Details of containers

Details of the bags tested are given in Table I. The bags were supplied by four different makers as suitable for packing 7 lbs. of corn starch for transport in fibreboard cases holding four bags. Bags E and F were supplied by their respective makers as "stronger" alternatives to Bags A and B. Bag G was supplied as the equivalent of Bag C, but made from a different kraft paper.

The fibreboard cases were made in solid fibreboard (0.080-in. thick) with the following internal dimensions (in.): length, 12⅛; width, 12⅛; depth, 7⅛. They were certified under the British railway regulations (1)[1] to hold 60 lbs. and were divided internally into four compartments by half-slotted interlocking partitions made from solid fibreboard 0.090 in. thick.

The bags were filled with 7 lbs. of corn starch and the tops folded over. With half the bags, the two ends of the folds were secured to the body of the bag with a short piece of gummed-paper tape and with the other half string was used. These two classes behaved identically and no distinction is made between them in the following discussion.

Transport trials

Sixty-four cases containing 256 bags were used for the transport trials. In order that each variety of bag should be as far as possible exposed to the same transport hazards, the four positions in each case were occupied by bags of different varieties. Since seven varieties of bag were to be tested, Bag B was used in all series to provide a common basis for comparing results. The bags were arranged in the cases as illustrated on opposite p. 157.

The cases were closed by silicate glue and the joints covered with gummed-paper tape. The bags were a tight fit inside the cases and no free play was detectable when the cases were shaken.

The general scheme of the transport trials is shown in Table II. The cases were dispatched to four widely separated destinations in the United Kingdom in four series of consignments; the first and second series (Bags A, B, C and D), and the third and fourth series (Bags E, B, F and G), respectively, were duplicates separated in time by about three weeks. In each series, consignments of four cases were sent from a London factory to agents in Birmingham, Paignton, Belfast and Aberdeen and back. The total distances and traveling times are shown in Tables II and III. The journeys were by goods train and with the Belfast consignments there was a sea voyage as well. All consignments were, in addition, conveyed short distances by railway road-de-

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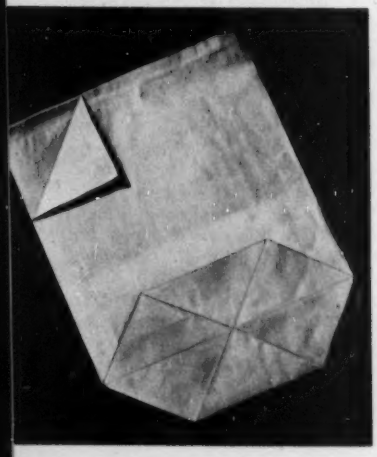
†Monkhouse & Glasscock, Ltd., Snowfields, London S.E. 1, England.
**Printing, Packaging & Allied Trades Assn., Leatherhead, Surrey, England.

KRAFT PAPER BAG of type used in test, with corner cut and folded to show greaseproof lining.



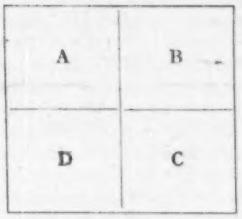
[1]Figures in parenthesis refer to references appended.

TABLE I—DETAILS OF BAGS

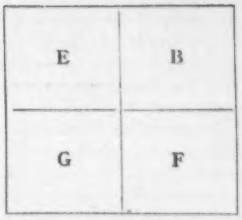
Bag	*Maker*	*Description*	*Size (circumference) of bag, in.*	*Price per 1,000 (in 1949)* *Shilling*	*Pence*
A	I	All bags were rose- (or block-)	20.2	114	0
B	II	bottom type; outer bag of	21.2	92	6
C	III	kraft paper; inner-liner bag	21.6	100	9
D	IV	of greaseproof paper. The	20.3	84	9
E	I	length of each was about	20.6	118	0
F	II	13 in. when flat	21.2	110	0
G	III		22.3	100	9

livery van between the London factory and the goods terminus and between the distant terminus and the point of re-dispatch.

As the cases returned to the factory, their external condition was first noted in qualitative terms and they were then opened and the bags inspected, each being recorded as "failed" or "intact." It had been decided in advance to class a bag as having failed if there was a split or tear large enough to allow sufficient corn starch to escape to attract the attention of a customer. There was no difficulty in applying this criterion, because all the splits were considerably larger than this implied minimum. The results are given in Tables II and III.



1st and 2nd series



3rd and 4th series

All the failures were in the walls of the bag, never in the folded tops or the bottoms. Apart from this, all parts of the bag appeared equally liable to failure; in particular, the failure rate was no higher near the seams or folds than elsewhere.

Splits and tears did not occur with equal frequency in the parts of the bag walls adjacent to different parts of the cases. First, of 34 splits and

TABLE II

	Consignment	Destination	Distance (double journey), miles	Actual time on rail, etc., days	Serial No. of case	State of case on return	Bags intact (−) or failed (+) Variety A	Variety B	Variety C	Variety D	No. of bags failed (grouped by destination)
First series	(i)	Birmingham	226	5	1	Undamaged	−	−	−	−	2
					2	"	−	+	−	−	
					3	"	−	−	−	+	
					4	"	−	−	−	−	
	(ii)	Paignton	444	7	5	"	−	+	−	+	4
					6	"	−	−	−	−	
					7	Crushed at one side	−	+	−	−	
					8	One corner crushed	−	−	−	+	
	(iii)	Belfast	700	12	9	Undamaged	−	+	−	−	5
					10	One corner crushed	−	+	−	+	
					11	Undamaged	−	−	−	−	
					12	"	+	−	−	+	
	(iv)	Aberdeen	1046	12	13	"	−	+	−	+	6
					14	"	−	−	−	+	
					15	One edge slightly damaged	−	+	−	+	
					16	Undamaged	+	−	−	−	
	Number of bags failed (grouped by variety)						2	7	0	8	17
Second series	(v)	Birmingham	226	11	17	Undamaged	−	+	−	+	4
					18	"	−	−	−	−	
					19	Crushed at one side	−	−	−	+	
					20	Undamaged	−	+	−	−	
	(vi)	Paignton	444	6	21	Crushed at one side	−	+	−	+	6
					22	One corner severely crushed	−	−	−	−	
					23	Crushed at one side	+	−	−	+	
					24	Undamaged	+	−	−	+	
	(vii)	Belfast	700	19	25	One side almost torn out	−	−	−	+	2
					26	Undamaged	−	−	−	+	
					27	One side holed, one seam opened	−	−	−	−	
					28	Undamaged	−	−	−	−	
	(viii)	Aberdeen	1046	12	29	"	−	−	−	+	4
					30	"	−	−	−	+	
					31	"	−	−	−	−	
					32	"	−	+	−	+	
	Number of bags failed (grouped by variety)						2	4	0	10	16
	Total number of bags failed (both series)						4	11	0	18	33

tears, 28 (82%) occurred adjacent to the side walls of the cases and only 6 (18%) adjacent to the partitions. Secondly, there was a marked tendency for the failure to occur more frequently near the corners of the cases. Usually, failure took the form of a vertical split, running in the machine direction of the bag, though this sometimes developed into an irregular tear when damage was severe.

A statistical analysis was made of the number of bags that failed, in relation to variety, series, destination and time of journey; the main conclusions were: (*a*) The best result (lowest failure-rate) was given by Bag C, which was slightly better than Bags A and E (not themselves significantly different) and markedly better than Bags B and F (also not significantly different). The worst result was given by Bags D and G. The order of merit was therefore: (1) Bag C, (2) Bags A and E, (3) Bags B and F, (4) Bags D and G. (*b*) The number of failures was not significantly affected by the destination to which the consignments were sent, the distance traveled or the transit time.

Laboratory drop-tests

Bags and cases used for laboratory tests were from the same batches as those used in the transport trials.

Preliminary tests. Cases filled with Bag C were dropped on a concrete floor from a measured height. They were held in the required position with canvas slings attached to a pulley system by means of a quick-release mechanism which was operated when the case reached the required height. The sequence of positions used at each height was as follows:

Drop number	*Case dropped on*
1	Bottom
2	Bottom edge
3	Bottom corner
4	Side face
5	Side edge
6	Top
7	Top edge
8	Top corner

TABLE III

	Consignment	*Destination*	*Distance (double journey), miles*	*Actual time on rail, etc., days*	*Serial No. of case*	*State of case on return*	*Bags intact (−) or failed (+)* Variety B	Variety E	Variety F	Variety G	*No. of bags failed (grouped by destination)*
Third series	(ix)	Birmingham	226	7	33	Slightly crushed	−	−	−	−	4
					34	Crushed	+	+	+	+	
					35	Slightly crushed	−	−	−	−	
					36	" "	−	−	−	−	
	(x)	Paignton	444	8	37	Badly crushed	−	+	+	+	9
					38	Undamaged	+	+	+	+	
					39	Crushed and torn	−	−	+	+	
					40	Undamaged	−	−	−	−	
	(xi)	Belfast	700	15	41	Crushed, severe tear on one corner	+	−	−	+	10
					42	Crushed	+	+	−	+	
					43	Undamaged	−	+	−	−	
					44	Badly crushed	+	+	+	+	
	(xii)	Aberdeen	1046	11	45	Slightly crushed at one side	+	−	+	+	9
					46	One edge and corner crushed	−	−	+	+	
					47	One corner slightly crushed	+	−	+	+	
					48	Undamaged	−	−	−	+	
	Number of bags failed (grouped by variety)						7	6	8	11	32
Fourth series	(xiii)	Birmingham	226	14	49	Undamaged	+	+	−	+	7
					50	"	−	−	+	+	
					51	"	−	−	−	−	
					52	Very badly crushed and torn	+	−	−	+	
	(xiv)	Paignton	444	36	53	Undamaged	−	−	−	−	3
					54	Undamaged apart from one hole	−	−	+	−	
					55	Crushed on one edge	−	−	−	−	
					56	Badly crushed on one edge	−	−	+	+	
	(xv)	Belfast	700	20	57	Crushed along one edge	+	−	−	+	8
					58	Undamaged	−	+	−	+	
					59	Slightly crushed, torn on one side	−	−	−	+	
					60	Slightly crushed on one edge	+	+	−	+	
	(xvi)	Aberdeen	1046	18	61	Undamaged	−	−	−	−	1
					62	"	−	−	−	−	
					63	"	−	−	−	−	
					64	Slightly crushed at one corner	+	−	−	−	
	Number of bags failed (grouped by variety)						5	3	3	8	19
	Total number of bags failed (both series)						12	9	11	19	51

At a height of 1 ft. no bags failed in any position. At 2 ft. Drops 1 and 6 caused failure. At 3 ft., omitting Drops 1 and 6, no failure occurred. At 4 ft. Drops 2 and 7 caused failure. Above, and sometimes at 4 ft., the case itself broke up.

In these tests, of the 18 bags which split, 17 were split vertically and one with a jagged tear. Fifteen splits occurred adjacent to the outside walls of the case and three adjacent to the partitions. Results are almost identical with those of the transport trials.

Since in the transport trials no cases were broken up completely, it seems most unlikely that drops of 4 ft. and above occur in service. It was therefore concluded that failure was mainly due to the case falling flat, or nearly so, on its bottom or top. Since the behavior in these two drops was identical, in all subsequent drop tests the only position of drop used was that where the case fell squarely on its bottom (Drop 1).

Testing procedure. Cases were made up as for the transport trials, i.e., one set of cases contained Bags A, B, C and D and the other set contained Bags E, B, F and G.

Testing was done in two ways: (1) The case containing the bags was dropped on a concrete floor from a height of 1 ft. The process was repeated, raising the height 3 in. at each drop and the height at which each bag failed (referred to as the breakage height) was noted. A failed bag was replaced by another of the same variety. (2) The case was repeatedly dropped from a height of 2 ft. and the number of drops required to cause each bag to fail was noted. Replacements were made as before.

The results are given in Table IV.

TABLE IV—RESULTS OF LABORATORY DROP-TESTS

Bag	*Breakage height, ft.*	*Mean*	*Number of drops to break*	*Mean*
A	3½	3½	18	18
B	2, 2½, 2	2⅙	5, 5, 8, 6	6
C	3½	3½	13	13
D	1¾, 1¾, 1¾	1¾	3, 5, 4	4
E	2¾, 2	2⅜	13, 12, 8	11
F	2½, 1¾	2⅛	5, 10, 6	7
G	2½, 2½	2½	2, 6, 4	4

Effect of size of bag

Since the bags supplied had different circumferences (Table I), the influence of circumference on the breakage height of the bag was investigated.

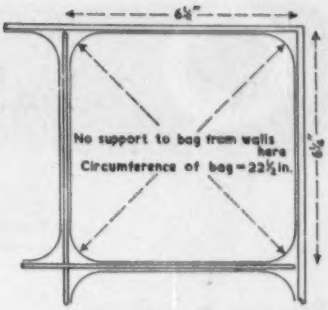
This was done by making a number of rose-bottom bags of the following circumferences (in.) from one batch of kraft paper: 20.0, 20.6, 21.8, 22.6, 23.6. All the bags were 13 in. long when flat. The bags were packed into cases and the breakage height of each size determined as before. The results are given in Table V.

TABLE V—EFFECT OF CIRCUMFERENCE OF BAG ON BREAKAGE HEIGHT

Circumference of bag, in.	*Breakage height, ft.*
20	1¾
20.6	1¾
21.8	1¾
22.6	2½
23.6	2½

It can be seen that above about 22⅝-in. circumference the breakage height increased by 6 in. This increase is probably due to the support given to the walls of the bag by the outside walls of the case and the inner partition walls. A bag of 20-in. circumference would just touch each wall tangentially and a bag of 25-in. circumference would form a complete square touching at all points. A 22⅝-in. bag is supported over 17 in. of its circumference by the walls. This would account for the strong tendency for splits and tears in the bags to occur mainly near the junction of the partitions and the walls of the case, as over this part of the bag no support is obtainable (see illustration of upper right).

The result of a drop in the vertical position would therefore be to cause



the portion of the wall of the bag immediately opposite a corner to be under tension from the expanding effect of the corn starch as it settled suddenly. The support provided along the wall would prevent the same tension at these positions. Thus a better performance would be expected from all the varieties of bags tested if their circumferences were increased to 22⅝ in.

Paper tests

It would be desirable to be able to specify a paper with certain properties for making bags for a particular purpose. In the tests described above a number of bags of different behavior in service varying from very good to poor were available. It was therefore decided to examine the bags by the usual paper-testing methods (2) for bursting strength, tensile strength and resistance to tear. Since the main strength of the bag resided in the kraft paper, only this was tested. The results are given in Table VI.

It will be noted that Bags E and F were supplied as stronger alternatives to Bags A and B, respectively, and the paper tests confirm the description. Bag G, supplied as the

(*This article continued on page 199*)

TABLE VI—RESULTS OF PAPER TESTS

Bag	*Thickness, in.*	*Bursting strength (Schopper-Dalen), lb./sq. in.*	*Tensile strength, lb./sq. in. Machine direction*	*Cross direction*	*Resistance to tear, g. Machine direction*	*Cross direction*
A	0.007-0.008	44	35.2 (1.6)	14.4 (3.6)	132	162
B	0.003-0.004	38	22.4 (2.4)	17.6 (3.1)	75	81
C	0.005	39	27.2 (2.4)	16.0 (2.5)	87	99
D	0.005	48	33.6 (1.8)	19.2 (2.1)	105	108
E	0.007-0.008	43	33.6 (2.6)	18.8 (5.0)	156	171
F	0.003-0.004	52	32.0 (2.9)	22.8 (3.6)	122	134
G	0.005	40	24.8 (2.5)	14.0 (4.9)	107	199

Note: Figures in parentheses in Columns 4 and 5 are percentage elongation of paper at break.

Q & A

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Heat-sealed vs. folded liners

QUESTION: We have been discussing the relative merits of using heat sealing as compared to folding for the closure of bags in cartons and for carton liners. Our product is a granular material requiring some moisture-proofness and we are interested in modernizing and improving our production equipment. Would you give us your opinion on this subject?

ANSWER: A carton liner or a bag in a carton can be satisfactorily closed by either heat sealing or by the proper type of folding to give ample protection and siftproofness for the type of product you described. If the liner materials or bags you are using are capable of heat sealing, this operation can be performed satisfactorily with a heat-sealing unit in your production line to close the bag or carton liner. However, if for economy or any other reason you prefer to use a material which is not heat sealable, you can also obtain an equally satisfactory closure by making a double fold if you make sure that this fold is held under compression by the carton flaps. The combination of a well-formed double fold and sufficient compression to hold the folds in position will prevent water-vapor from entering and will also prevent sifting.

If your product demands an extremely high functional property such as gas tightness, complete greaseproofness or extremely low levels of water-vapor permeability, then the heat-seal closure would be preferred. Since your product does not have any of these requirements, you will not find any difference between the heat-sealed closure and a good double fold.

Sealing a soft paper pouch

QUESTION: One of our packages consists of a soft paper which has been coated with a heat-sealing resin and formed into a large pouch. We are continually experiencing difficulties with the seals which we make to close the top of this package. We are using a jaw-type sealer with heat controls which can make strong seals, but occasionally makes seals which are extremely weak even though they have had sufficient heat applied. Can you advise us how to overcome this?

ANSWER: The combination of a soft, porous paper and certain easily sealable resins may require a special sealing technique to assure the production of strong seals.

Your problem comes from the fact that the resin you are using appears to have a limited sealing range and your thermostatic control is not holding the jaw temperature within this optimum sealing range. When the jaw temperature becomes too high, the resin is forced into the paper and the seal's strength is greatly reduced.

One solution to your problem could be the use of somewhat lower jaw pressures so that the fused resin is not forced into the paper. A better answer would be to use a more sensitive thermostat so that the jaw temperatures are always held within the optimum range.

Oil penetration

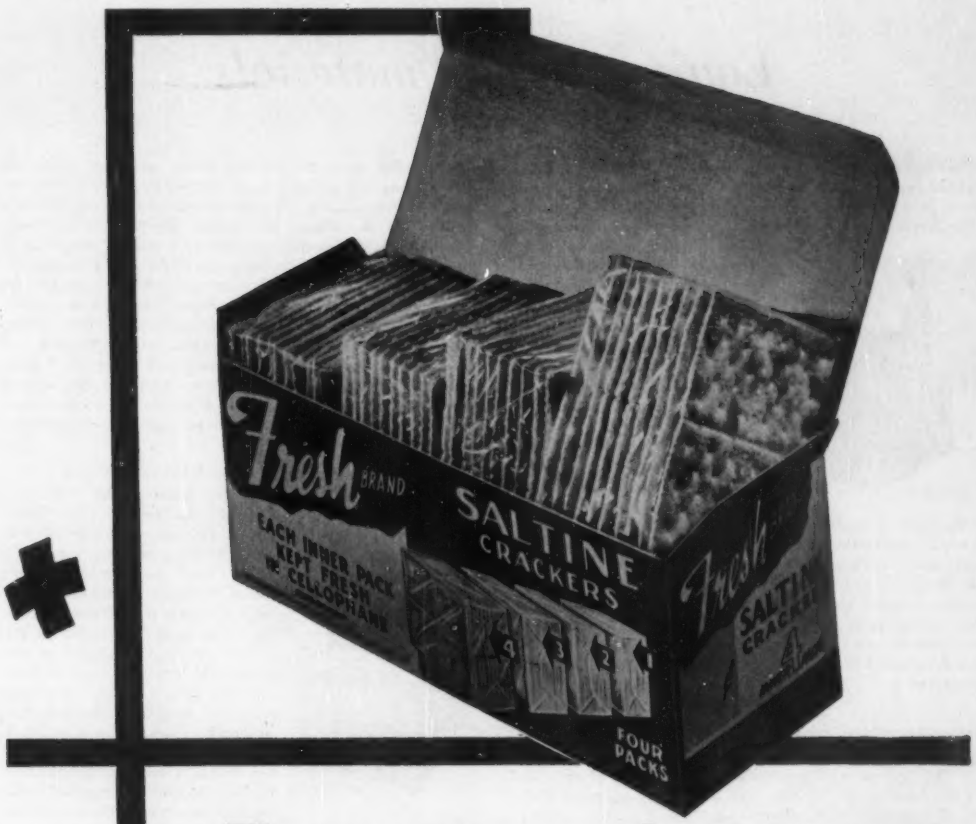
QUESTION: We have been using a polyethylene pouch, heat sealed on four sides, as a container for a small metal pipe carrying a preservative oil. We have found that certain oils can go through the polyethylene very readily and cause staining, while others do not. Could you suggest a film that could be formed into this type of package and which would be more oil resistant than polyethylene?

ANSWER: Polyethylene film might be satisfactory for your purpose if you could always use an anti-corrosive coating which remains in a solid or plastic form. Polyethylene film would not be satisfactory if the anti-corrosive coating was a very thin oil or if it contained some of the synthetic compounds which have been recently added to many anti-corrosion formulations. It may be that you cannot control the type of coating used on the metal parts. In this case, it would be advisable for you to try other plastic films to prevent penetration and staining by the oil. It is suggested that you try several different types and formulations of vinyl films. These films are generally characterized as having excellent resistance to oils, great strength and excellent heat-sealing properties.

Mechanical gluing of foil

QUESTION: For a long time we have been looking for a means of mechanically gluing aluminum foil to aluminum foil. Can you tell us how this is done and the type of adhesive most suitable?

ANSWER: When two impervious materials such as aluminum foil are laminated together, it is necessary that the laminating agent contain no volatile materials. If water solvents or any other volatile materials are present in the adhesive after lamination is made, they can cause blistering and delamination if the structure is exposed to warmth. The preferred method of making such lamination is to coat one or both of the foil webs with a resinous material in solvent solution. The solvent is then evaporated and the two foil webs combined with heat and pressure. Obviously, the laminate selected must have good adhesion to the aluminum surface and must be capable of easily releasing its solvents and combining under heat and pressure. Fortunately, there are a number of adhesive combinations that meet these requirements and so the problem is usually one of the proper equipment to obtain proper drying and subsequent combining.



Three common denominators make the fractional package successful

Behind the success of any new package—like the fractional cracker package—you'll find three essentials: knowledge of people's buying habits . . . technical know-how that makes for efficient package construction . . . and selection of a packaging film scientifically tailored to the needs of the product.

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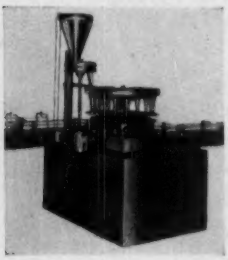
Equipment and materials

A HIGH-SPEED POWDER TIGHT PACKER
has been introduced by Frazier & Son, 338 Cortlandt St., Belleville 9, N. J., and is described as a new and improved version of the company's Whiz-Packer automatic rotary filler and conveyor combination. It has been especially designed for handling granular or powdered materials where high-speed production is required and where vibration for a tight pack and elimination of dust are desired. Each model is custom built; models adapted to a wide range of sizes and shapes in flat bottom, wide- or narrow-mouth containers are available. Each model is best suited for use on one container size or possibly a two container-size operation, according to the company. At speeds up to 120 per minute, full settling of the fill is furnished in the rotary filler section where containers are filled and vibrated simultaneously. Dust accumulation is controlled by the seating relation of the container adapter spouts to the container openings. All machines have agitation in the hopper appropriate to the product, a no-container-no-fill device, a variable-speed control and provision for making small weight adjustments while the machine is in operation.



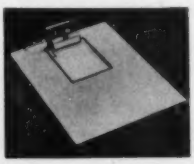
A HAND UNIT FOR HEAT-SEAL LABELING
is now being produced by the Lakso Co., Inc., P. O. Fitchburg, Mass. The unit uses delay-action heat-seal labels, which will do a dry-labeling job on hot, cold, wet or dry surfaces; wet glass, chilled cellophane, polyethylene, waxed paper, rubber, metals and paperboard are among the surfaces which can be successfully labeled with this type of label using this machine, according to the company. In operation, a label is fed into a slot on the labeler head, then the unit's roller is rolled in one direction across the surface to be labeled, using a light hand pressure. This rolling motion pulls the label between temperature-balanced heating elements which activate the adhesive and it emerges to be immediately pressed flat and free of air pockets by the roller, all in one motion. Advantages pointed out by the company include freedom from smudged labels because heating elements exert no pressure on label; heating elements which never contact labeled surface, thereby avoiding effects of heat on difficult films or sensitive products. The Lakso labeler is produced in three sizes: Model D-2 illustrated takes labels with a 2-in. maximum width and a 2-in. minimum length; Model D-4 uses labels with a 4-in. maximum width and a 3½-in. minimum length; Model D-6 takes labels up to 6 in. wide, with minimum length of 3½ in.

A NEW VINYL PLASTIC FILM FOR FATS AND OILS
has been developed by R. L. Kuss & Co., Inc., Findlay, Ohio. Designated K-flex BV, the new film is said to assure protection of flavors and odors of products packaged in it. Laboratory tests showed its ability to stop strong onion and turpentine odors for as long as 100 hrs. at 100 deg F. and 92% humidity, and it is impermeable to carbon dioxide, oxygen and hydrogen sulfide. The film is non-toxic, remains fully flexible at zero deg. F., has a tensile strength of 2,200 p.s.i. and an elongation of over 200%, according to the company. Meat, meat products, lard and animal fats are especially recommended packaging uses for the new film. It is available in preformed liners for inexpensive fibre boxes and it is said that the strength of the liner enables such packages to withstand all hazards of transportation and handling. In such applications by meat packers, excellent packaging cost savings are reported. Entire contents of the packages are recoverable without scraping or waste. The company also makes K-flex DV vinyl plastic film for packaging non-fat products.

A HIGH-PRECISION FAST CHECK-WEIGH SCALE
sensitive to 1 milligram has been introduced by The Exact Weight Scale Co., 944 W. Fifth Ave., Columbus 8, Ohio. Called the Model UAB 9061 Shadograph, the unit is especially adapted for hand filling and check weighing of very small packages or the individual weighing of small articles. Scale capacity is 2,000 milligrams. In use, a weight equivalent to the desired net load is placed in the commodity pan; the scale is then balanced with a sliding screw-lock poise and weight is removed. The commodity container is a stamped aluminum pan of 1-in. diameter and ¼-in. depth. Three pans balanced to the same weight are supplied. The dial has no value graduations other than the exact weight point and shows up to 20 milligrams over and 35 milligrams under, with a total indicator sweep of 2⅛ in. Indication is of the Shadoedge type. The scale has a cast aluminum housing 11⅛ in. long, 7 in. wide and 10 in. high. Platter height is 6⅝ in. The company claims that this scale is from three to four times as fast as the ordinary balance.

A ROLLER CONVEYOR TURNTABLE
for gravity systems has been developed by Lamson Corp., Syracuse, N. Y. The turntable unit consists of a roller section, plus two auxiliary rolls. It can be locked in position so that packages flow uninterrupted along either axis of two right-angle-intersecting conveyors, or it can be used as a switch to change the direction of a package's travel. In this use, a package is stopped on the swiveling turntable while the unit is unlocked and manually turned. A simple foot treadle controls the lock.

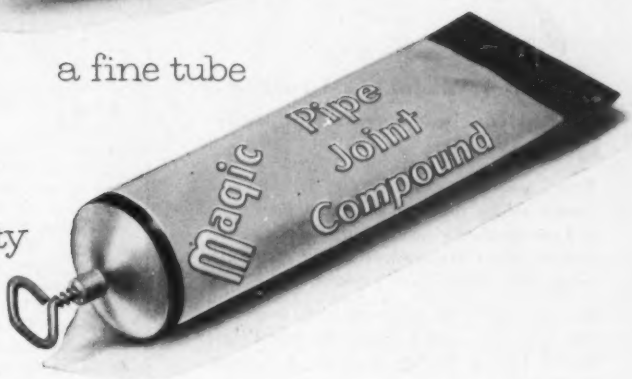
AN IMPROVED FILM-SEALING HOTPLATE UNIT
designed primarily for supermarket pre-packaging has been developed by Cleveland Lathe & Machine Co., 5400 Brookpark Rd., Dept. 69, Cleveland 29, Ohio. The portable unit includes a hotplate mounted flush on a 16-by-32-in. wrapping surface. Attached to the hotplate is a control hood with a 175 to 600 deg. F. thermostat, a thermoswitch and a red indicator light. Also supplied is a bumper block for simultaneous end sealing; this block attaches in either straight or angled positions



Like a banana skin....

a fine tube

protects quality



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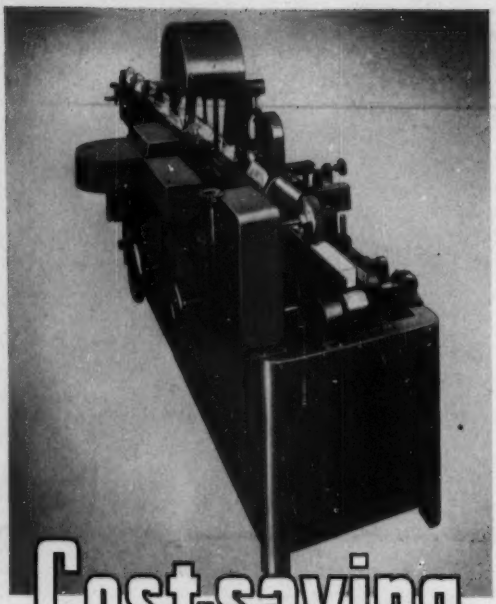

Cost-saving 'Generator'

New Peters Model CCY-L Folding & Closing Machine prompts money-saving ideas

Here's a machine that isn't content to save money all by itself. It generates packaging and production ideas . . . suggests new, improved, more economical ways of folding, lining and closing your cartons.

At least, that's the experience of companies who have seen and installed the new Peters Model CCY-L Carton Folding & Closing Machine.

Your investigation will be well worth while. Call or write . . . or send samples of your cartons for specific recommendations.

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and has one flat side and a grooved side for sealing around nesting paper trays. A Teflon cover for the heated surface is supplied at slight additional cost for use when sealing very soft films. The heat from the sealing surface is kept from damaging surfaces below the unit by an insulating and reflecting protection of laminated foil and asbestos on Masonite. The wrapping surface is rigidized stainless steel, insulated to prevent wrinkling. Although developed specifically for sealed transparent wrapping in supermarkets, the unit is said to be suitable for use on any number of products wrapped in heat-sealing film.

A PRINTER-FORMER-FILLER FOR BAGS OR CARTONS has been introduced by the West German firm of Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Nauheimer Strasse 99, Stuttgart-Bad Cannstatt. The company's line, shown at this year's Technical Fair at Hannover, includes a bag machine, a carton machine and a bundler which puts a tight kraft paper

wrapping around the packages in groups up to 20. The packaging machines are fed with a roll stock. The bag machine prints the web with two aniline colors, then forms a squared-off bag which is filled to volumetric measure and closed by a double top gluing—first inside, then in the top fold. Another version of this machine will form double-walled bags and the standard machine will handle foils and other materials if they meet the strength requirements. The combination of a tight fill with an automatic height-compensating device on the closure mechanism is said to result in taut, well-shaped packages. The carton-forming and filling machine feeds board from a reel, prints, scores and cuts the web, and forms the cartons around mandrels before filling. Cartons get a tight closure independent of fill height. Where the utilitarian two-color aniline printing is not satisfactory, the carton machine can be stack-fed with cut blanks which have been printed by other methods; the bag machine can be fed a preprinted roll which by-passes the printing section. The company's bundling machine will handle either the cartons or the bags, providing a tight kraft wrapping said to be suitable for shipping use. Units up to 20 can be combined in a bundle and the machine will also aniline print the wrapper, according to the manufacturer.

The photo shows Hesser's PHBR machine producing paper packages with two-color aniline print.

PHOTO-ELECTRIC RELAY UNITS designed for use in applications requiring specialized control characteristics are now available from S. J. Dietz Co., 38 River Edge Rd., River Edge, N. J. In addition to simple on-off type of operation, these units are available with features such as time delay before response, time delay after response and response to extremely short actuation impulses. The variety of characteristics is obtained by adding elements to the basic chassis; all units fit into the standard housing. These industrial units are equipped with a transformer for isolation from power

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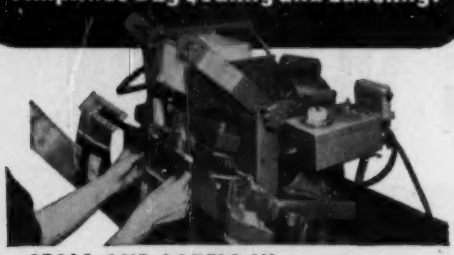
Simplifies Bag Sealing and Labeling!



SEALS AND LABELS IN ONE EASY OPERATION!

No staples—no pins—no handwork!

Simultaneously attaches labels and heat seals all bag materials up to 6" wide or seals, only, to 10" wide! Finger-tip control with automatic Phantom Feed. Quickly pays for itself 2 ways: Lowers labor cost; requires no expensive thermo-plastic coated papers.
Positive vacuum pick-up insures individual label feeding. Maintenance-free vacuum pump cam driven—no expensive power supply required. LOWEST PRICED MACHINE OF ITS TYPE—WRITE FOR CIRCULARS!

GLOBE HEAT-SEAL, INC.

3372 S. Robertson Blvd., Los Angeles 34, California

►HAND JAR AND BOTTLE FILLER

For the manufacturer who needs fast, accurate, spill-proof hand fillings. Flow of liquid or cream controlled by simple, hand-operated valve.

- Pint, quart, half-gallon, gallon sizes (metal stands at extra cost)
- Available in tin, monel metal or stainless steel
- Easy operation
- Moderately priced

Glass containers since 1849

HAGERTY BROS. & CO.

Division of J. Rabinowitz & Sons, Inc.

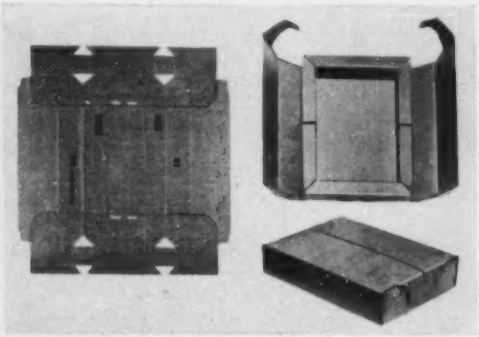
2 Hanson Place, Brooklyn 17, N. Y.

Equipment and materials

lines and use telephone-type relays to permit a variety of contact arrangements. The company also reports availability of a complete line of photo-electric sensing elements, light sources, remote phototube units and scanners for use with relays.

CORRUGATED BOXES WITH SPECIAL CUSHIONING

to protect contents are manufactured by Shelton Mfg. Co., 591 Ferry St., Newark 5, N. J. These boxes were developed to provide four-side protection in the mailing of books by publishers, but can be adapted to provide the same exceptional protection



for any product that is mailed in quantity. Protection is secured by the folded tubular wall structure which gains additional strength by the addition of still another layer of corrugated board when the box is closed. The boxes are made of double-face corrugated board and are printed with corner card and postmaster information. The pattern of scores and cut-outs makes a box that folds quickly and remains securely closed, according to the company. It can be opened and reclosed by postal authorities as required by third-class mailing regulations without losing ability to contain and cushion contents.

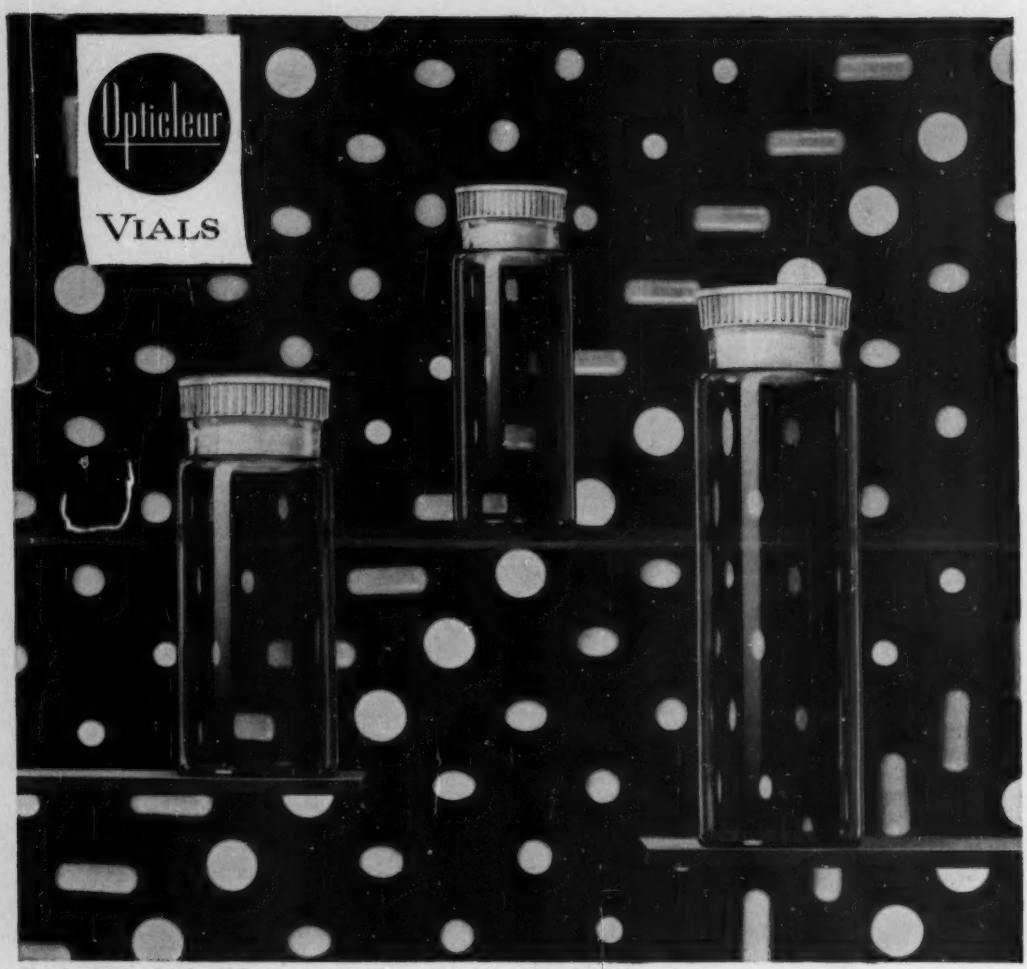
AN EASY-TO-CARRY PRODUCE BAG

for potatoes, onions, apples, oranges and similar heavy items has been developed by the Equitable Paper Bag Co., Inc., 45-50 Van Dam St., Long Island City 1, N. Y. The special built-in cushioned handle enables a shopper to carry as much as 15-lbs. Bag construction saves time and labor in use because there is no fold or pucker at the closure; the bags are closed in one operation with wire staples or by sewing along the top. "Take-Hold" bags are made of Equitable's wet-strength paper, Aquatite, in duplex construction and come in solid face or the mesh window style shown.

POLYETHYLENE STOCK AND CUSTOM BOTTLES

in a new line are announced by Trina, Inc., 30 Alleppo St., Providence, R. I. Plax Corp., West Hartford, Conn., supplies the squeezable containers. Containers in the Trina line are suitable for colognes, lotions and other liquids or creams. Available are 1-, 2-, and 3-oz. jars, 2- and 4-oz. custom bottles, 2-, 3- and 5-oz. taper round bottles decorated in a hearts-and-flowers or a gold-filigree design, and oblong bottles of 2-, 4- and

Makes good merchandise sell better...
Hold Kodapak Sheet up to the light. Clear as crystal, it sparkles with brilliance. This you see instantly, realize that here is a material endowed with package-glamour, with real sales-appeal. But what you can't see is vital, too—the sheet-after-sheet uniformity that makes Kodapak always efficient, always economical to use.
For further information, consult your local representative, or write Cellulose Products Division, Eastman Kodak Company, Rochester 4, N.Y.
Sales offices: New York, Chicago, Dallas. Sales representatives: Providence, Cleveland. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.) Toronto, Montreal (Paper Sales, Limited).
Swim suits, courtesy of Rose Marie Reid
Kodapak Sheet
"Kodapak" is a trade-mark



Gleaming, lustrous Opticlear Vials keep contents fresh and clean.

Pack in beauty – pack in KIMBLE OPTICLEAR VIALS

Show off the superiority of your product, and give it safe protection in handsome Kimble Opticlear Vials.

These trim, sparkling containers keep contents fresh, dry and clean . . . free from dust, dirt and moisture.

Inside a Kimble Opticlear Vial your product can be safely stored in refrigerators or bathroom medicine cabinets. New, resilient, plastic stoppers keep contents dry with a positive moisture-proof seal.

Distinctive Opticlear Vials improve the salability of every dry product packaged in them. See how attractive your product will look, too. Write now, and we'll send you free samples of the sizes you use.

KIMBLE GLASS COMPANY

Toledo 1, Ohio

Subsidiary of Owens-Illinois Glass Company

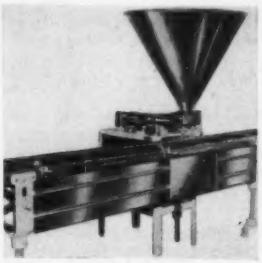
6-oz. capacity. Caps of blue or pink phenolic and polished brass, also a brass atomizer top, may be obtained.

HUMIDITY INSIDE SEALED PACKAGES

can be measured in a matter of seconds with the Hydrotector system originally developed for use by the Armed Forces by American Instrument Co., Inc., Silver Spring, Md. The Army Engineers use the units to check moisture content inside sealed Type II packages and mothballed equipment covers. The unit is said to be a mass production development of the original Aminco-Dunmore hygrometer and measures degree of moisture to an accuracy of 2½%. In operation, a small sensing element is placed inside the package before sealing and connected electrically to a set of contacts in a mounting on the outside of the package. To test moisture content of the package interior, it is necessary only to plug in a lead from a portable meter to the mounting on the package. The meter, when connected, reads "safe" or "unsafe," depending on conditions inside the package. Thus there is no need to break the package seal to discover if the original seal is still effective. The company also states that Hydrotector elements and mountings can be installed in packages already sealed without doing harm to the moisture barrier.

A FULLY-AUTOMATIC FOOD FILLER

for filling mayonnaise, jams, relish and similar semi-solid food products at speeds of 40 to 60 containers per minute has been introduced by F. L. Burt Co., 571 Seventh St., San Francisco 3, Calif. The unit is equipped with an 8-ft. chain conveyor to bring cartons, cans or jars under the dispensing pistons. The two-piston filling mechanism is said to be adjustable to fill containers from 2-oz. to 1 gal. The hopper, available either in cone or "U" shape, holds 40 gallons. Dismantling time is only eight minutes and sanitary metals make for easy cleaning. Construction is described as featuring exceptionally heavy castings and parts that contact food products are either acid-resistant stainless steel or nickel alloy.



EXTRUSION AND LAMINATION SERVICE

in the South is announced by Cotswald Fibres, Inc., Columbus, Ga. The company reports that it is extruding polyethylene, saran and nylon films, and laminating to woven glass, woven saran, cotton cloth and scrim, paper, aluminum foil and paperboard. Some of the applications for this output reported by the company are: Government barrier materials, woven glass insulation tape, vaporproof and waterproof bags, packaging assemblies, multiwall paper bag lining, deep freeze coated paper, Air Force glass-fibre-reinforced plastic structure, tarpaulins, greaseproof bakery plate products, and drum and carton liners.

For packaging that will open purses

employ the Magic of

Rayco Flock

Write for sources of Rayco Flock-coated velour papers, standard and Day-Glo shades. DESCRIPTIVE CIRCULAR AVAILABLE.

Rayon Processing Co. of R. I., Inc.

PIONEER PRODUCERS OF SURFACE-COATING FLOCKS

110 Moshassuck St. Pawtucket, R. I.

Plants and people

Dow Chemical Co., Midland, Mich., named **Raymond F. Boyer**, former director of the company's physical research laboratory, as manager of plastics and high-polymer research. Mr. Boyer will be succeeded by **Dr. William C. Bauman**, assistant director of the laboratory, and will replace **L. C. Chamberlain**, who has been named assistant to the director of research, **Dr. R. H. Boundy**.

R. F. Boyer

Dow has also announced the appointment of **Denis J. Mullins** as plastics molding powders salesman for the New York area.

William S. Gilbert has been elected to administer the research program of **T.A.B. Engineers, Inc.** (Technical And Business Engineers), Chicago, Ill.

F. Eugene Englander has been appointed sales manager of the Richmond Division of **Gar Wood Industries, Inc.**, Richmond, Calif.

The **United States Printing & Lithograph Co.**, Cincinnati, Ohio, has acquired the **Sackett & Wilhelms Lithographing Corp.**, Long Island City, N. Y., in a transaction which involved the outright purchase of all capital stock of Sackett & Wilhelms. **William J. Volz** will continue as president of Sackett & Wilhelms Corp., which will be operated as a wholly owned subsidiary of U. S. P. & L.

Construction of a new plant for the manufacture of glass containers has been announced by the **Hazel-Atlas Glass Co.**, Wheeling, W. Va., manufacturers of glass containers and metal closures. The new plant, located at Plainfield, Ill., will be the 15th owned and operated by the company.

The **Dobeckmun Co.**, Cleveland, Ohio, has appointed **Wilbur L. Lenox** as retail marketing specialist on its market research staff. Mr. Lenox will devote his efforts to specialized activities in the field of supermarket merchandising.

The Plastics Division of **Celanese Corp.**, New York, has appointed **Richard J. Hough** as West Coast district manager with headquarters in Los Angeles.

Sylvania Div., American Viscose Corp., Philadelphia, Pa., has extended its customer service and packaging-development work by increasing personnel and laboratory facilities at the Chemical Research Dept., Marcus Hook, Pa. New equipment is available and all types of packaged products can be studied under conditions met in the trade.

Sylvania has announced the appointment of **J. Rabinowitz & Sons, Inc.**, 2 Hanson Place, Brooklyn, N. Y., as Metropolitan selling agents for Sylvania cellulose bands.

R. C. Flom

Several sales organization promotions have been announced by **Marathon Corp.**, Menasha, Wis., manufacturer of protective food-packaging materials. **Russell C. Flom**, formerly manager of sales promotion, has been appointed director of sales for pulp, paper and paperboard. This move consolidates the sale of the pulp, paper and paperboard produced by the company in one sales section. **Ralph Fannon** of the company's Rothschild, Wis., office will continue as manager of pulp sales. **Palmer McConnell**, who formerly directed sales promotion for the company's line of stock products, has been appointed sales manager of that product division.

P. McConnell

Sales managers also have been appointed for the company's various food-packaging lines. **Walter Dixon** has been named sales manager for dairy packaging; **Fred M. Deutsch** for frozen-food packaging; **Eugene V. Krueger** for meat and vegetable-oil packaging; and **Harold E. Pierce** for bakery products packaging. All will direct field sales of their respective products for the company.

W. Dixon (left) and F. M. Deutsch

E. V. Krueger (left) and H. E. Pierce

Williamson Adhesives, Inc., Chicago, has expanded its facilities to provide a completely new service for manufacturers who need assistance in processing specialty products. Called the Williamson Specialty Compounding Div., the new service will include laboratory research, development work, compounding, manufacture, packaging and shipping.

Shellmar Products Corp., Mt. Vernon, Ohio, has appointed **W. R. Eichelberger** as general sales manager of its flexible packaging division, with headquarters in Mt. Vernon. **Edward C. Crowley** has been named manager of Shellmar de Mexico, S. A. **L. K. Hanson**, who has been combining the duties of manager of the Mexican company with management of Shellmar's foreign operations and export organizations, will now devote his entire time to the latter duties.

United Board & Carton Corp., Syracuse, N. Y., has promoted four men at the company's Syracuse carton plant. **Jesse Cummins** has been made general superintendent in charge of all operations at the Syracuse unit. **Gerald Conroy** has been appointed assistant to Mr. Cummins. **Ernest Blessing** has been placed in charge of the Engineering Department and **Homer Martin** has been promoted to regional sales manager with headquarters in Syracuse.

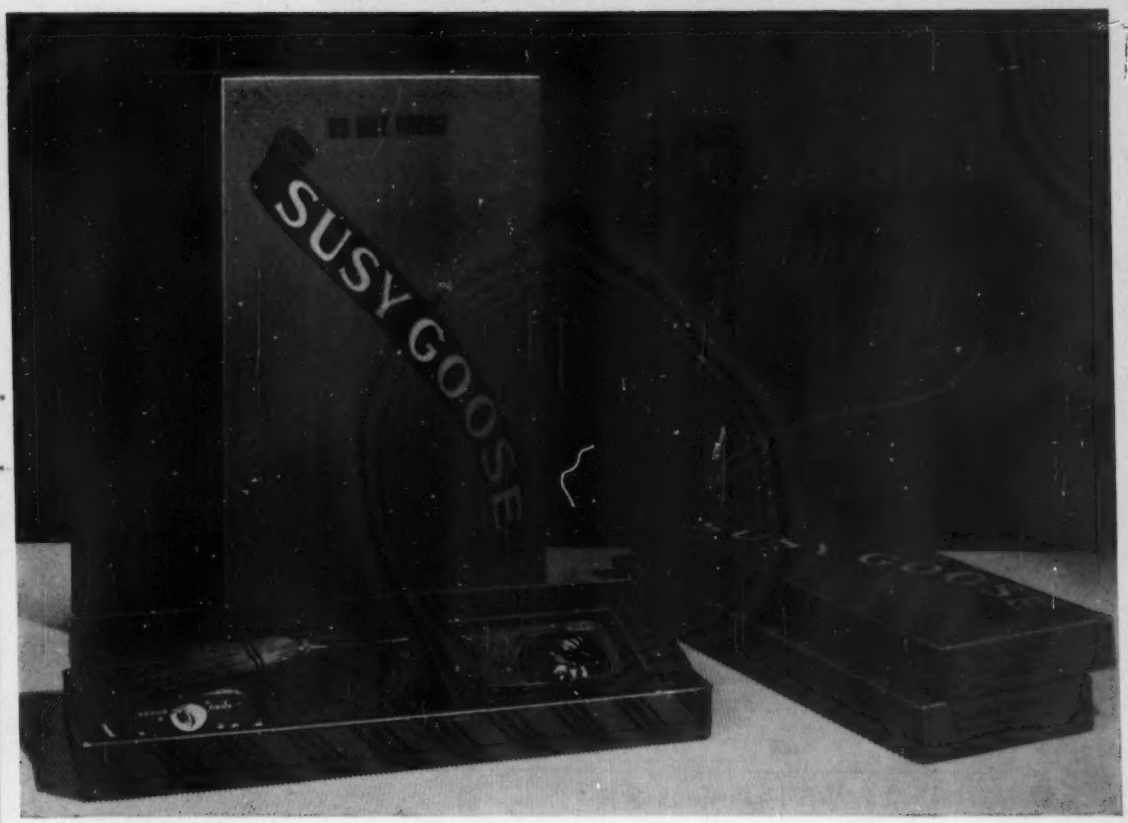
Union Bag & Paper Corp., New York, has appointed **E. T. Nelson** as assistant sales manager for multiwall bags in the company's Western District at Chicago.

Sales headquarters for **Pak-Well Paper Products Co.**, originally established at San Francisco, have been moved to Portland, Ore. **James H. Hagan**, will be sales manager at Portland.

Walter L. Hardy has joined the **Foster D. Snell, Inc.**, organization, New York, as director of package engineering. Mr. Hardy is author and co-author of numerous technical directives on protective packaging materials and procedures. He is a member of the Packaging Institute, the Technical Assn. of the Pulp & Paper Industry, the Society of Automotive Engineers and the Industrial Advisory Committee on Packaging of the National Production Authority.

W. L. Hardy

United States Plywood Corp., New York, has opened a new sales and distribution



How to make your package a "sweeping" success!

Toys, like hundreds of other products, sell faster in colorfully-printed merchandising packages like these that catch the eye. In this instance, the master shipping box protects the goods in transit to the retailer, while providing prominent brand name identification. And the toys are delivered in clean, factory-fresh condition to the customer without repacking . . . *and costs go down.*

Be sure *your* packaging does everything possible to build good will and to increase sales and decrease costs. Call in an H & D Package Engineer today. For free fact-packed booklet, "How To Merchandise With Corrugated Boxes," write Hinde & Dauch, 5203 Decatur St., Sandusky, Ohio.

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Don't hide your product
Show it —
in Cellophane *

The customer buys where she can see what she's buying. And where the product is freshest

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FAST— EASY TO USE!

Handles 101 Small Products

ONLY $60.00
Slightly higher with extra large bag chute.

The Anderson Bagger, Model 134, is a simple, low cost machine that is doing an outstanding job for thousands of users in many industries. Operator can fill a bag and place it in a carton in one operation.

Stainless steel bag chute, capacity 200 bags, adjustable to bag sizes. Blower, equipped with air filter, opens bag and keeps it free from foreign matter.

Easy to operate at high speed with a minimum of effort. Here is a machine that pays for itself quickly. Write today and tell us your product.

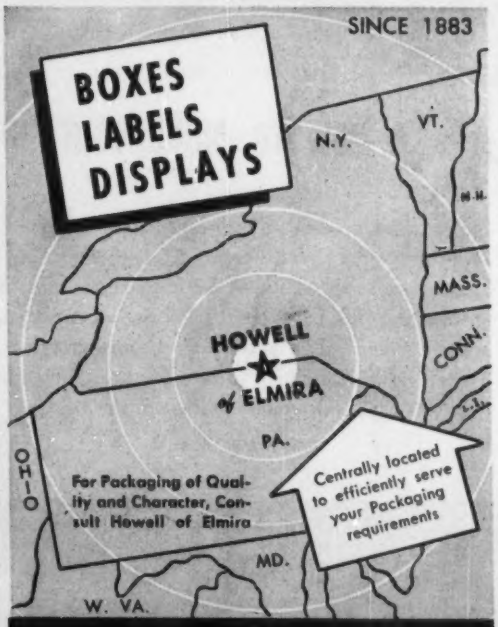
Anderson BROS MFG CO

Send Today for Bulletin No. 9-29

ANDERSON BROS. MFG. CO., ROCKFORD, ILL.

SINCE 1883

BOXES LABELS DISPLAYS



F. M. HOWELL & CO.
79-95 Pennsylvania Ave., Elmira, N. Y.

Plants and people

unit in Columbia, S. C. The company operates a chain of such sales and distribution units at strategic points throughout the country. **Albert M. Hill, Jr.**, has been named manager of the new unit.

Stirling Martin has been made assistant general manager in charge of sales of the W. Harris Thurston Fabrics Div. of **Reeves Bros., Inc.**, New York. **James J. Schweppe**, formerly manager of the Reeves Woven Plastic Fabrics Dept., will be a special assistant to Mr. Martin, heading up sales of Reeves-Thurston industrial fabrics including box tapes and fabrics for the coating trades.

The **Chemical Development Corp.**, Danvers, Mass., manufacturer of products for the plastic and allied industries, has appointed **Allied Products Engineering Corp.**, 4710 Crenshaw Blvd., Los Angeles, as its representative in California.

Two New York district sales managers have been appointed by **Plax Corp.**, West Hartford, Conn., manufacturers of plas-

P. Curtis (left) and W. J. Hardgrove

tics products. **Paul Curtis** has been named sales manager in charge of the squeezable plastic bottle and other blownware products. **Wallace J. Hardgrove** has been made sales manager for plastic tubing, film and other extruded products. Both will be located in New York.

The Air Materiel Command, Wright-Patterson Air Force Base, Ohio, has appointed **Lt. Col. Robert W. Johnson** as head of two Air Force packaging agencies. He has been named chief of the AMC's newly established **Packaging Division** and chairman of the **Air Force Packaging & Materials Handling Board.** Col. Johnson is succeeding **Col. Rudolph Fink**, who is now assistant director of Maintenance Engineering, AMC.

Republic Foil & Metal Mills, Inc., Danbury, Conn., has announced a personnel realignment to provide for expanding operations and added customer service. **Robert A. Prinz** is manager of the newly formed product control department in Danbury. **Howard E. Walters** is Chicago

REEVES specializes in tapes

to solve your box-binding problems!

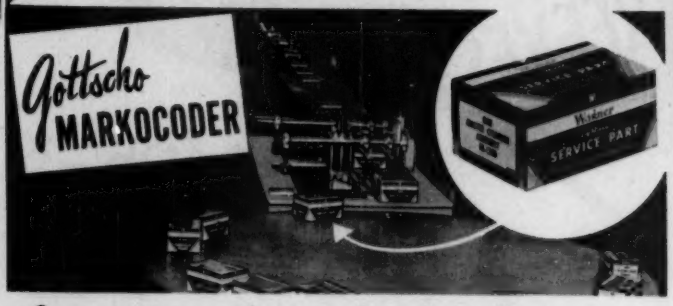
- *For Glue Stripping Machines*
- *Holland Finished Cloths*
- *Dry Gummed Tapes*
- *Thermo-Plastic Tapes*

Reeves tapes combine extra-strength with thinness . . . are specially finished to prevent glue seepage and color change. They're made by experts who know your problems and how to solve them. Each lot is tested on Reeves own stripping machine to insure you of smooth, trouble-free production. If you are hampered in production by tapes that don't perform right—call on Reeves.

For further information and a special sample kit of Reeves Box Tapes, write us on your company letterhead.

REEVES BROTHERS INC., W. Harris Thurston Division
54 Worth Street, New York 13, N. Y.

SAVES MONEY 6 WAYS...



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Write for
▶ 6-page brochure
describing
MARKOCODER
uses and
advantages

The MARKOCODER is the cost-saving machine that delivers precisely registered, "print-quality" imprints of contents descriptions, code-dates, colors, sizes, flavors, prices, other supplementary information on packages as a synchronized part of your packaging operation. Models for cartons, boxes, cans, canisters, jars, bottles, paper containers, etc.

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FILL your dry and semi-dry products *automatically* and *inexpensively* with a

FILLMASTER VIBRATORY FILLER

STUYVESANT ENGINEERING COMPANY
707 STUYVESANT AVENUE LYNDHURST, NEW JERSEY

Plants and people

regional sales manager, replacing Mr. Prinz. **Henry A. Bell** is Eastern regional sales manager.

Howard R. Stewart has joined the headquarters sales group of **Standard-Knapp Div. of Emhart Mfg. Co.**, Portland, Conn., manufacturer of automatic packaging machinery for can, glass and carton production lines. Mr. Stewart, formerly vice president of Economic Machinery Co., is a director of the Packaging Machinery Mfrs. Institute.

H. R. Stewart

R. F. Norcott has been promoted to sales manager of the **Chase Bag Co.**, Chicago. Mr. Norcott, with Chase more than 12 years, was formerly a salesman in Buffalo and Chicago. Chase has also promoted **George K. Whyte** to manager of its factory and sales office in St. Louis.

Syntron Co., Homer City, Pa. manufacturer of vibratory material-handling equipment, has organized a Canadian subsidiary, **Syntron, Ltd.**, and purchased a manufacturing plant at Stoney Creek, Ont., Canada. In addition, the company has opened a new store at 236 N. Crawford Ave., Chicago.

Harry L. Smith, Jr., has been made staff manager of product sales for **Aluminum Co. of America**, Pittsburgh, Pa. Mr. Smith will work closely with the vice president in charge of product sales and with the sales managers for the various company products. **W. T. Mitman**, now with Alcoa's Washington, D. C., sales office, will succeed Mr. Smith as manager of sheet and plate sales.

Sealright Co., Inc., Fulton, N. Y., has marked its 35th anniversary with a tribute centered around its president and cofounder, **E. W. Skinner**. Together with the late **Wilbur Wright**, Mr. Skinner formed the company and started producing the first cylindrical paper containers and milk bottle caps. The company's product contributions in sanitary food packaging since that time have been many.

E. W. Skinner

Durethene Corp., Chicago, makers of polyethylene film, have purchased a site in the airport industrial area of Los Angeles where they plan to build a plant

This tall, round Duraglas toilet bottle, 4A-4719, capped with a smart lustreseal closure can help you capitalize on brand recognition at the point of purchase.

MAKE-UP makes the difference...

gives your package individuality . . . your line a family look!

With impulse buying growing, every package you send to market must have *impact* at the point of purchase.

Your product will make a hit with consumers when packaged in a distinctive Duraglas sales-package. They're economical . . . so practical in use.

There are hundreds of stock-mold Duraglas containers from which to choose one that's exactly right for your product. Then, packaging specialists at the Duraglas Center help you add glamour and sales appeal to your selection with effective designing of color, label and closure.

In today's competitive selling conditions you need to capitalize on the distinctive individuality you can give your product in a Duraglas sales-package. And remember, no matter what the market is like, it doesn't pay to let your package get out of the habit of selling every minute it is on display.

Duraglas straight-sided, tall, round toilet bottles are available in 4-oz., 6-oz., 8-oz., and 16-oz. sizes.

Duraglas packages are protectors of quality

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OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

Christmas wrapping 29 proven designs

In stock ready for immediate shipment we have twenty-nine different Christmas designs. This is the most complete assortment available. It ranges from inexpensive but gay designs in one or more colors to rich metallics.

These designs are available in roll form in 12″, 15″, 18″, 20″, 24″, and 30″ widths. Basis weights are 24 x 36—35#.

By sending in the attached coupon you will receive our complete sample book. Do it today before it's too late.

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Glass Packers Everywhere Welcome This New Economy!

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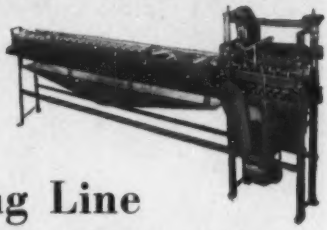

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AIR-CLEANS

Handles wide-mouth jars. Thoroughly rinses with hot water, blows out dust and loose foreign matter, and/or sterilizes with steam. Two types: one for water, air and steam singly or in combination, and one for air only. Get Bulletin and prices.

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SPECIAL CONVERTING EQUIPMENT DESIGNED TO MEET YOUR PRODUCTION PROBLEMS

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TELEPHONE: VERONA 8-3915

JOHN Dusenbery COMPANY, INC.

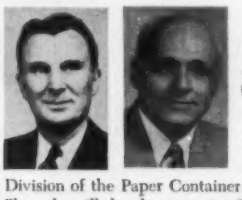
Plants and people

which will be ready for production in October, 1952. The West Coast will be serviced from Los Angeles when the plant is completed. Sales and customer service will be handled by **John McSparran,** who will be in charge of the new operation.

Continental Can Co., Inc., New York, has created three new general manager posts within the company's Central (Metal) Division. The new posts carry full responsibility for all sales and manufacturing operations within a given district. The appointments are: **R. S. Hatfield,** general manager of the North-Central district; **Frank I. Gill,** general manager of the Mid-Central district; and **John L. Heinlein,** general manager of the South-Central district.

R. S. Hatfield (left) and F. I. Gill

Continental has appointed **Carlton L. Shmock** manager of sales for the Central Division of the Paper Container Div. Mr. Shmock will headquarter in Cleveland, Ohio, and will have supervision over all Continental paper container sales in Ohio, Michigan, Wisconsin, Indiana, Illinois, Kentucky, Missouri, Kansas, Nebraska, North and South Dakota, Wyoming, Colorado, New Mexico, Oklahoma, Texas and portions of Louisiana, Arkansas, West Virginia, Pennsylvania and Montana. Continental's Paper Container Div. has also appointed **William H. Wallace** as assistant to the general manager of sales.



J. L. Heinlein (left) and C. L. Shmock

Arthur E. Stevenson, assistant to the general manager of the Research Div. of Continental Can, has retired after 26 years with the company. Mr. Stevenson was the recipient last year of the Nicholas Appert Award given by the Chicago Section of the Institute of Food Technologists.

Crystal Tube Corp., Chicago, converters of cellophane, polyethylene, Pliofilm and other transparent packaging materials, will be represented in the Memphis, Tenn., area by the **Herbert S. Liebman Co.,** of Chicago. **Herbert S. Liebman** will direct activities for Crystal Tube.

The **Hudson Sharp Machine Co.,** Green Bay, Wis., has appointed **Donald Page,** sales engineer, as assistant to vice president **L. P. Bourgeois,** to cover sales in Wisconsin, Illinois, Missouri, Iowa and Minnesota. Mr. Page, who came to Hudson Sharp in 1942, will be located in Chicago.

D. Page

Col. Walter F. Siegmund, former general sales manager of **Olin Industries, Inc.,** has retired after 21 years of service. Col. Siegmund has combined an active military career with his duties at Olin.

National Container Corp., New York, has opened a Stock Box Division in its Long Island City plant and a warehouse in the New York City garment and millinery district. The new division will carry over 75 different sizes of kraft corrugated stock-size shipping boxes.

The Avery Adhesive Label Corp., Monrovia, Cal., has just assigned additional territory to **R. F. Brumfield,** head of the Cincinnati, Ohio, office. Mr. Brumfield's new district includes Eastern Kentucky with headquarters in Cincinnati.

Norman T. Beardsley has been made general sales manager of **The Gummed Products Co.,** Troy, Ohio. Mr. Beardsley has had experience in nearly all phases of the paper industry. He was formerly associated with Crossett Paper Mills, Crossett, Ark., and prior to that was manager of the Board & Pulp Div. of the Union Bag & Paper Corp., New York.

N. T. Beardsley

St. Regis Paper Co., New York, has acquired management and cutting rights on a tract of 47,500 acres of pine in Florida. The new acreage makes an important addition to the company's raw-material resources for its southern operations.

Frank E. De Luca has been appointed sales manager of the newly created Long Island sales district of **American Can Co.,** New York. The Long Island district includes Connecticut, all of Long Island, the metropolitan area except Manhattan, and Sullivan, Dutchess, Ulster, Orange, Rockland and Putnam Counties in New York. The metropolitan district will now

perforations for particular packagers

Differing ventilation problems require different solutions. Roto Bag believes that this choice of perforations will answer your special requirements. Both perforating units are standard accessories to all Roto Bag machines. These devices do not complicate or reduce regular bag production.

CIRCULAR PERFORATION

Two longitudinal rows of holes whose number may be varied and which may be placed laterally as desired. Excellent for all packaging materials.

PARALLEL VENTS PERFORATION

Length of vent can be altered to suit. Perforation intervals and lateral placement are adjustable. This type adaptable for Polyethylene and Pliofilm only.

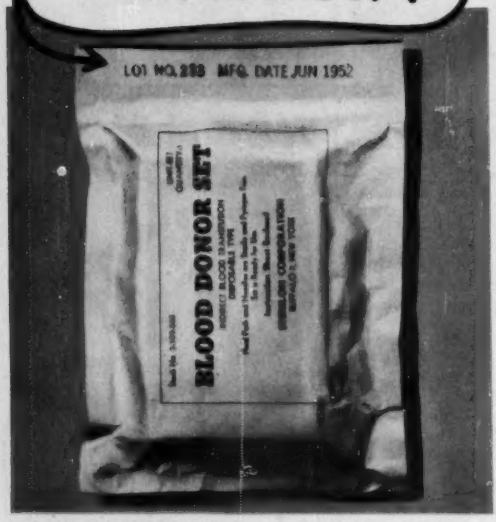
FOR SAMPLE PERFORATIONS WRITE:

Roto Bag MACHINE CORP.

130 EAST 13th STREET, NEW YORK 3

ASK FOR SPECIFICATIONS OF OUR FAMOUS BAGMAKING MACHINES.

Heat seal and code in one operation with DOUGHBOY!



STERILON CORPORATION of Buffalo, N. Y., uses DOUGHBOY equipment for sealing and coding foil bags containing blood donor kits.

THE DOUGHBOY ROTARY CODE SEALER combines super-speed (up to 900 inches per minute) with versatile output. It handles materials ranging from heavy laminates (required to meet current rigid MILITARY and NAVAL packaging specifications) to such lighter materials as glassine, cellophane and wax type bags. In addition to the code-dater attachment, this machine is available with compression section and hole punch device.

Further details gladly furnished on request to

DOUGHBOY INDUSTRIES, INC.
Mechanical Division • New Richmond, Wisconsin

Give Your Product a Chance to sell itself in these ATTRACTIVE *Transparent* PLASTIC CONTAINERS!

Perhaps we can help introduce a new product or "pep up" the Sales of an old one.

From hardware specialties to toys — from fruit cake to cheese assortments and countless other items — all are "glorified" with *Weinman* Boxes.

Send for Samples.

Weinman Brothers, INC.
MANUFACTURERS
3260 W. GRAND AVE., CHICAGO 51

MILITARY SPECIFICATION PACKAGING ☆

BAGS & ROLLS

MOISTURE-PROOF
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WATER-PROOF
•
VAPOR-PROOF
•
GREASE-PROOF

Write, Wire or Phone Your Orders

We sell a complete line of cloth backed, paper backed and foil backed barrier materials to meet requirements of Army, Navy and Air Force packaging; also, gummed and pressure sensitive tapes, packing list envelopes and protectors.

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MIL-C-6056	JAN-P-101	JAN-B-121
UU-P-271c	JAN-P-115	JAN-B-148
100-14-A	JAN-P-128	JAN-P-108
19-B-13	JAN-P-131	JAN-P-116
MIL-B-131A	JAN-P-140	JAN-P-117
MIL-C-10547	JAN-P-658	JAN-P-125
MIL-E-6060	AN-B-20	JAN-P-127
MIL-B-3149	AN-C-67b	JAN-P-130
JAN-P-100	AN-E-1b	FS-100-N5
	AN-T-12a	

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Plants and people

include only the borough of Manhattan.

American Can has opened a new plant at Stockton, Calif. The plant is Canco's ninth in California.

Roland H. Johnson, former sales manager of the Can Making Machinery Div. of the **E. W. Bliss Co.,** Canton, Ohio, has rejoined the company as an executive.

Kraft Bag Corp., New York, manufacturer of heavy-duty multiwall shipping sacks, has appointed **James M. Gager, Jr.,** to its sales staff. Mr. Gager will cover Tennessee, Georgia, South Carolina and part of North Carolina, from headquarters in Chattanooga, Tenn. **Richard A. Berger** has joined Kraft Bag's staff as administrative assistant in the New York office. He will handle multiwall sales in New York State exclusive of New York City.

A newly formed company, **Phoenix Industries, Inc.,** 400 W. North St., Indianapolis, Ind., has begun full-scale production in a plant expressly designed for the manufacture of aluminum-foil containers for baked, precooked and ready-to-cook food products. **Norman H. Abrams** is president of the new company. All products will be sold under the trademark "Foil Master Pak-Ware."

N. H. Abrams

Inland Container Corp., Indianapolis, Ind., has appointed **Floyd H. Nein** as sales manager of the company's Milwaukee sales district. Serving with Mr. Nein will be **Paul C. Zweck,** who has been appointed assistant sales manager of the Milwaukee district. **Ralph H. Drapp** has been made sales-service manager for Inland, also at Milwaukee.

The **General Bag & Burlap Co.** and the **Consolidated Bag Corp.** have announced the removal of their plants and offices to 3435 Melvale St., Philadelphia 34, Pa.

The Ohio Boxboard Co., Rittman, Ohio, has elected four new directors: **C. B. McDonald** of McDonald and Co.; **Francis H. Beam** of The National City Bank of Cleveland; **Dudley W. Maxon** of Wise, Roetzel, Maxon, Kelly & Andress; **M. E. Barthen** of Ohio Boxboard.

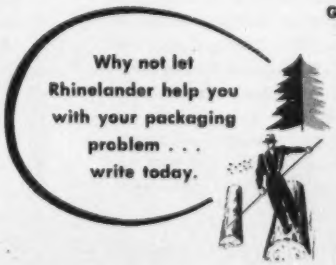
Joseph E. O'Brien has been named director of purchases for the company. **R. G. Hagey,** who had been director of purchases and president of **Oco Waste**

(This article continued on page 183)

This Paper
makes the difference

Pigs is Pigs, as the saying goes. Pigs to most of us mean bacon, sausage, ham, chops, and roasts. High in fat, pork requires better than average greaseproof packaging. And Rhinelander has special papers for every pig cut from snout to tail, as well as Lard-Pak to cope with hard-to-package lard itself.

The nation is full of young wives who are trying hard to become good cooks. Nevertheless, these young neophytes can turn out layer cakes that are second to none from those ready-to-bake cake mixes the grocers all carry. They are blended so skillfully and packaged so well in Rhinelander glassine even she can't go wrong.



Glassine and Greaseproof—the functional papers that do so many tough jobs well.

Rhinelander
PAPER COMPANY

Rhinelander, Wisconsin

Let in the LIGHT . . .
$ELL IT ON $IGHT . . .
Pack it in HOWARD *Seal* BAGS!

Combining visability, durability and saleability in one prize package, HOWARD SEAL polyethylene bags offer you the **most** in merchandising value.

"Job Engineered" to meet the specific requirements of your specific packaging needs, HOWARD SEAL bags are quality controlled during every step of the manufacturing, converting, and printing operations; — providing you with the perfect package in which to protect and promote your product.

Take a tip from thousands of other progressive packagers. Just "seal it and sell it" . . . in a HOWARD bag!

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HOWARD *Seal* PLASTICS

HOWARD PLASTICS

"Pioneers in Polyethylene Packaging"

- Main Offices: Council Bluffs, Iowa
- Plants at Council Bluffs, Iowa, and Tucson, Arizona
- In Canada: Transparent Paper Products Co. 5565 Cote St. Paul Rd., Montreal, Quebec

HUSKY HOWARD SAYS:

"ASK US TO ANALYZE YOUR PACKAGING PROBLEMS"

Investigate the many advantages offered by HOWARD SEAL packaging. The price of a postcard will bring you the services of a courteous consultant, who will show you how to produce more sales at a greater profit. Write or phone today!

Carton Blanks . . . economically at high speeds for long-run production

Custom-built, this Champlain Rotary Carton Press will repay its cost to the average heavy producer of cartons in a very short time. The Rotary Cutter and Creaser is available with the Champlain Rotogravure, Rotary Letterpress and Aniline-Anilox units. Finished carton blanks are produced from roll stock in any number of colors, in glossy inks or varnished, scored, cut and stripped at speeds as high as 500 feet per minute. Ask Champlain for the answer to high-speed, low-cost carton production.

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Champlain manufactures a complete line of rotogravure, aniline, rotary letterpress and allied equipment for packaging and specialty printing.

Batch to Batch Uniformity!

Rula **HEAT SEALING AND LAMINATING ADHESIVES**

water dispersion and solvent formulations

Rubber Latex Co. specializes in developing and preparing adhesives to meet your laminating and heat sealing needs. These adhesives are widely used for sealing and making laminated combinations of

acetate	polyethylene
cellophane	sulphite paper
pliofilm	glassine
saran	Kraft
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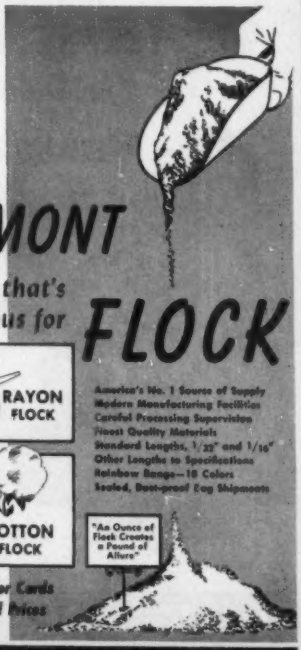
Rigid laboratory control guarantees the trouble-free performance of all Rula Adhesives.

Write for further details

RUBBER LATEX CO. of AMERICA

CLIFTON, NEW JERSEY



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***All-Purpose Straightline* VACUUM and GRAVITY FILLING MACHINES**

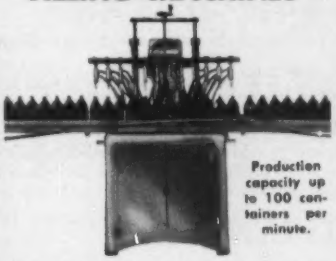
8 to 12 Spouts Production capacity up to 80 containers per minute

Fills thin to viscous liquids (shampoos, syrup, mustard, etc.). Fully adjustable to handle containers ranging from fractional ounce to one gallon — all shapes and mouth diameters, (glass, tin or plastic) including sprinkler tops, open top cans and jars.

A model for every need— from 10 to 400 containers per minute

12 Spout Semi-Automatic

VACUUM and GRAVITY FILLING MACHINES



Production capacity up to 100 containers per minute.

Ideally suited for filling thin and viscous liquids as well as shampoos, in containers ranging from 1 ounce to 1 gallon in glass, and up to quarts in metal — all shapes and mouth diameters. Fully adjustable from one size container to another. Supplied with 10 foot automatic intake and discharge conveyor with variable speed drive control.

Write Dept. MP-9 for literature.

mrm company, inc.

191 Berry Street, Brooklyn 11, N. Y.

Manufacturers of a complete line of fully automatic and semi-automatic filling equipment and fully automatic labeling machines.

THIS PUMP

...for vacuum and pressure...

(for Printing & Packaging Machinery)

is Oil-free

Never needs lubricating!

The Dexter-Conde DRI-AIR Pump delivers clean dry air and has these added advantages:

- Double sealed, grease-packed ball bearings
- No oil to get into the air stream
- No oil cups to be filled and turned down
- No greasy dirt around pumps
- No fire hazard
- No streaking of sheets from air blast
- Carbon graphite vanes don't stick; don't warp. Are chemically inert. Provide their own lubrication, becoming more efficient as pump is used.
- Pump is built with close tolerances. Has no gaskets to leak or blow
- Three sizes. One or a combination will meet any requirement.

Put your vacuum or air blast problem up to us.

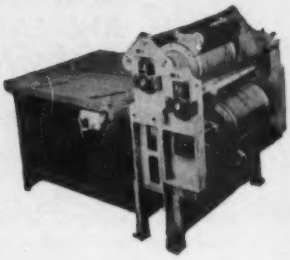
Write for literature.

Dexter Folder Company

General Sales Offices

330 West 42nd Street • New York 36, N. Y.

PRINT YOUR OWN SHIPPING CONTAINERS OR MULTI-WALL BAGS AS YOU NEED THEM



Industrial's Auto Printer

is suitable for imprinting information, addresses, marking, or whatever you may require on your containers or multi-wall bags. It is capable of printing as many as 2400 units per hour. Eliminates hand stenciling.

This is just one of Industrial's coding and marking machines designed specifically for your needs to assure more efficient marking and movement of materials on production lines. Marking equipment is also available for conveyor line use, and for marking munitions and similar items.

Let us help you—send us your problem; we will do the rest.

Write for catalog today.

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presents

FULLY AUTOMATIC LOW COST TABLET PACKAGING

- **STRIP PACKS** single or double widths
- **CUTS OFF** one, two, three, four, six and twelve long

* OTHER COUNTS AVAILABLE

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You save easily on hand wrapping time and costs with SOF-RAP. So soft and completely flexible, it readily conforms to any product's shape and may be handled "bare-handed" without danger of cuts or bruises—no slow-downs from clumsy work gloves. SOF-RAP TYPE C — is a single-ply cushion for interior protection from shock and bounce. TYPE B—a duplex cushion wrap combines Type C with a tough, durable, kraft outer sheet that permits "slippage" and prevents friction or abrasion damage. Sheets are strip-laminated with permanently flexible, non-hardening synthetic latex. SOF-RAP'S lightness of weight cuts shipping costs to the minimum.

Meets requirements type I, II and III cushioning materials under MIL — C — 11791 (QMC) and Army-Navy specs. Jan — P 100

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PAPER PRODUCTS COMPANY
GREEN BAY · WISCONSIN

Plants and people

(This article continued from page 179)

Paper Co., Cleveland, a subsidiary of Ohio Boxboard, will devote his full time to wastepaper procurement, with headquarters at the Oco Waste Paper Co.

Charles W. P. Atkinson, vice president and treasurer, has retired from the **Arner Co.**, Buffalo, N. Y., pharmaceutical manufacturers and custom packers.

Harry Posner, president of the **Worcester Paper Box Co.**, Medford, Mass., has been awarded the honorary degree of Doctor of Commercial Science from Tufts College. During the ceremony Mr. Posner was hailed as an outstanding industrialist and a generous supporter of medical education and research.

Owens-Illinois Glass Co., Toledo, Ohio, has promoted **Richard O. Spalding** to chief packaging engineer of corrugated package operations. Mr. Spalding succeeds **Paul J. Barcus,** recently retired.

Economic Machinery Co., Worcester, Mass., Div. of **George J. Meyer Mfg. Co.**, has appointed **James F. Parsons, Jr.**, as sales manager for "World" labelers. Mr. Parsons was formerly associated with the New Jersey Machine Corp. and had been doing special work on machinery research for the Meyercord Co. prior to his new appointment.

J. F. Parsons, Jr.

Marquardt & Co., Inc., New York, converter of decorative papers, has elected the following officers: **Randall H. Decker,** president; **Abraham L. Berman,** vice president; **Thomas H. Hogan,** vice president; **O. Karl Marquardt,** treasurer; **Corinne F. Marquardt,** secretary; **John J. Norris,** comptroller.

Edward T. Turner, Jr., has been promoted to staff assistant in the operations department of **The Gardner Board & Carton Co.**, Middletown and Lockland, Ohio. **Richard M. Gottlieb** has been promoted to the retail box sales staff of Gardner and will be assigned to the Cleveland sales office.

A thermal resin coater said to be one of the most modern and efficient in production today has been installed by the **H. P. Smith Paper Co.**, 5001 W. 66th St., Chicago 38. It is the company's third such unit to be installed. Coating speeds up to 1,000 ft. per min. with coating thicknesses from 0.0005 to 0.01 in. are

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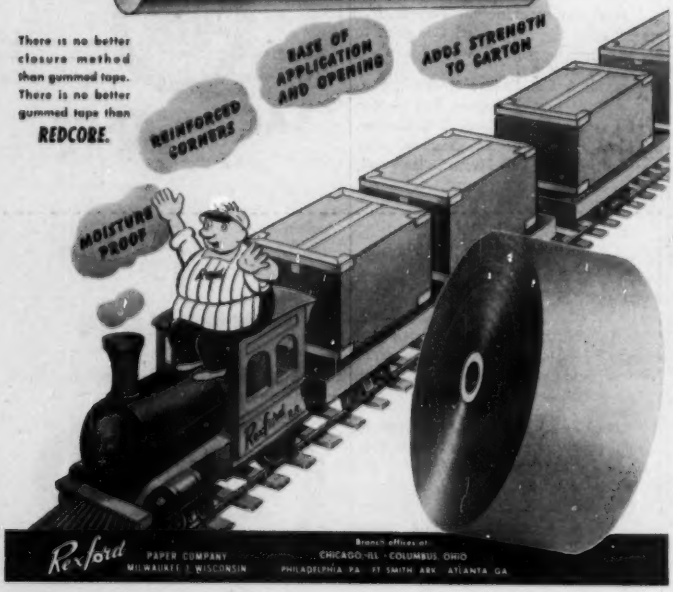
EASE OF APPLICATION AND OPENING
ADDS STRENGTH TO CARTON
MOISTURE PROOF



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Plants and people

possible on the machine, which is currently being used to apply polyethylene to fabric, board and foil webs. It was designed by the company's engineering staff and incorporates many patented features for close control of coating weight.

Elmer G. Stacy, Eastern sales manager of the **Klingrose Gravure Div.** of **American Type Founders,** Elizabeth, N. J. has joined the faculty of West Virginia Institute of Technology to teach the post graduate course leading to a degree of Master of Science in Printing.

T. W. Koch, director of advertising and sales promotion, **Shellmar Products Corp.,** Mt. Vernon, Ohio, died Monday, Aug. 18, following a sudden heart attack. With the exception of the war years, Mr. Koch had been associated with Shellmar since 1929, when he joined the firm as salesman. As a pioneer in the flexible-film field he was widely known in packaging circles and in the advertising profession for his ability as a speaker and writer. He was born in St. Paul, Minn., in 1890.

T. W. Koch

Charles Carl Carr, retired director of public relations and advertising for **Aluminum Co. of America,** Pittsburgh, Pa., died suddenly on July 29 in St. Petersburg, Fla. Mr. Carr began his career with ALCOA in 1934 as advertising manager. He was made director of public relations and advertising in 1944.

Lammot du Pont, former president of **E. I. du Pont de Nemours & Co.,** Wilmington, Del., died on July 24, at the age of 71. Mr. du Pont was the eighth member of the du Pont family and the third brother in succession to become head of the company. Under his administration, Du Pont research laboratories were increased almost seven-fold, an expansion which carried the company far ahead among industrial organizations pioneering in new scientific fields. Mr. du Pont retired as board chairman on Jan. 19, 1948.

Edward F. Herrlinger, pioneer in the paper industry, founder and chairman of the board of **The Gummed Products Co.,** Troy, Ohio, died on July 20. He was a former president of the National Paper Trade Assn.

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PRINTING INKS. Booklet explains the importance and place of printing ink in today's civilization, traces the history of printing ink and shows how today's inks are tailored to meet a variety of printing and packaging needs. National Association of Printing Ink Makers Inc. (I-251)

CARTON SEALING ADHESIVE. Laboratory report on "Cartonite 758," a fast setting glue for sealing bottoms and tops of soap powder, cleanser, dry food, cereal, salt and similar cartons on most makes of carton sealing machines. Paisley Products Inc. (I-252)

UPRESSIT CLOSURES. Brochure illustrates the full range of Upressit closures, tamper proof bands and special nozzles and spouts. Shows semi- and fully automatic machines for applying them to cans, glass bottles and steel pails and drums. Upressit Products Corp. (I-253)

ROTARY SADDLE LABELER. Details on a high speed bag labeling machine for cellophane, glassine, polyethylene, wax or laminated bag up to 11-in. wide. Handles labels from 2¾-in. to 8¾-in. wide, uneven front and back. The Woodman Co., Inc. (I-254)

TRANSPARENT PLASTIC CONTAINERS. Bulletin illustrates 23 different plastic containers, some with metal lids or bases, others with lace edge insets. Weinman Brothers, Inc. (I-255)

CAN LABELING. Helpful information on selecting a can labeling glue, a can labeling method and on avoiding labeling difficulties. National Adhesives, Div. of National Starch Products Inc. (I-256)

CORRUGATED CARTON MACHINES. Data on various Knowlton machines for high speed production of precision-made corrugated cartons. M. D. Knowlton Co. (I-257)

PACKAGING WITH STEEL. Use of a mobile carton stitcher to field-package lettuce, a method of bracing carload shipments against damage, a description of packaging overseas flood relief and other similar interesting data is contained in the latest issue of "Confab" issued by Acme Steel Co. (I-258)

"VISKON" NONWOVEN FABRIC. Data on applications of this versatile nonwoven fabric in meat wrapping, decorative pennants and banners, Christmas wraps, tea bags and other packaging applications. The Visking Corp. (I-259)

MERCURY "CELLO-SEALER." Data and specification sheet on a high-speed sealer for cellophane and other heat sealing films and foils which is available as a bench model or on a stand Mercury Heat Sealing Equipment Co. (I-260)

PACKAGING MACHINERY. The complete line of Redington machines for automatically cartoning nearly every sort of product, for wrapping, forming trays, coding, counting, filling and banding is described in a brochure issued by F. B. Redington Co. (I-261)

AIR SHIPPING IN CORRUGATED BOXES. Booklet telling how to pack most efficiently for air shipment. Hints on maximum sizes and weights, special products, restrictions, etc. The Hinde & Dauch Paper Co. (I-262)

"ECO-PAK" PACKAGING. Brochure describes a popular European package, now available in America, consisting of an airtight, sift-proof container that is formed, filled and sealed automatically on special equipment. Suitable for free-flowing dry and semi-liquid products. Alfred Hofmann & Co. (I-263)

HEAVY DUTY BOX AND LABEL PRINTER. Data on a Markem machine for imprinting stacks of loose labels at high speed and for imprinting information on labels which are already on cartons. Markem Machine Co. (I-264)

WET PACKAGING MACHINE. Information on a machine for automatically packaging wet products such as sauerkraut or pickles in brine, fish in natural juices, and precision tools in oil, in Pliofilm and other liquid-tight heat sealable bags. Edfin Packaging Machinery Corp. (I-265)

PACKAGE FILLING MACHINES. Four bench models of the "Whiz-Packer" for filling all types of free flowing and granular products, plus a description of the hopper feed conveyor. Frazier & Son. (I-266)

CARTONING. Report on the cost of cartoning by hand compared to cartoning by machine. Nine group studies are classified by types of operations, permitting direct comparisons with similar operations. R. A. Jones & Co., Inc. (I-267)

PRODUCE PRE-PACKAGING POINTERS. Leaflet designed to help the retailer establish the proper pre-packaging procedure, and to select the proper grades of produce and packaging materials. Sylvania Division, American Viscose Corp. (I-268)

BAG HANDLING EQUIPMENT. Details on special equipment which flattens, elevates and facilitates the pallet loading of large-size filled multiwall paper bags. Power-Curve Conveyor Co. (I-269)

AUTOMATIC CASE SEALERS. Specifications and important data on automatic and semi-automatic case sealers for gluing and sealing light or heavy corrugated shipping containers. J. L. Ferguson Co. (I-270)

COATING MACHINES. Bulletin on Potdevin Type 2 R coating machines for labor-saving application of coatings of glue, latex, varnish, resins, and thermoplastics. Potdevin Machine Co. (I-271)

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EQUIPMENT • SUPPLIES • SERVICES

PACKAGE WRAPPING AND FILLING MACHINES. Details on various textile, food and notion products which are wrapped and packaged on machines manufactured by Package Machinery Co. (I-272)

JAR INVERTING AND CLEANING LINE. A complete unit for rinsing, cleaning and sterilizing wide mouth glass jars and cans is described in a bulletin issued by the Chisholm-Ryder Co. (I-273)

STORING CELLOPHANE. Recommendations on the best methods for storing cellophane so as to prevent its deterioration. British Cellophane Ltd. (I-274)

INTERIOR PACKAGE FOR PHARMACEUTICALS. Folder explains use of "Kimpak" cellulose wadding as a protective interior wrap for various glass pharmaceutical containers. Kimberly-Clark Corp. (I-275)

RUST-PREVENTING-PAPER. Case histories show how Angier VPI paper is used to protect metal from rust at lower cost than by older methods such as oil or grease slushing. Angier Corp. (I-276)

DUPLEX AUTOMATIC LABELER. Information on an automatic bottle labeling machine which provides neat and uniform labeling and rolling at two complete labeling stations, and a single line discharge. Standard-Knapp, Div. Emhart Mfg Co. (I-277)

FILLING MACHINES. Several models of Anderson filling machines for bottles, tubes, jars, cans and other containers are described in a bulletin issued by Anderson Bros. Mfg. Co. (I-278)

HEAT-SEALING MACHINES. Various jaw-type bag heat sealers, including several interesting variations which permit coding, etc. are described in folder issued by Globe Heat-Seal Inc. (I-279)

CONVEYING EQUIPMENT. Catalog illustrates a complete line of unscrambling, accumulating and assembly tables, bottle, jar and can conveyors, horizontal, incline and decline conveyors, power units, pallet dollies and other materials handling equipment. Numerous installation photographs. Island Equipment Corp. (I-280)

THERMAL IMPULSE HEAT SEALERS. Bulletins explain the advantages of and show the method of operation of the various models of Vertrod "Thermal Impulse" heat sealers for plastic film and laminates. Data on alloy surface and Teflon-Fiberglas surface heater bars. Vertrod Corp. (I-281)

RIGID PLASTIC CONTAINERS. Catalogue contains illustrations, dimensions, color selections, and suggested uses for nearly 200 stock plastic boxes which are molded of "Styron." Lists sources where these items may be obtained. The Dow Chemical Co. (I-282)

PACKAGING IN ACETATE FILM. Booklet describes the advantages of packaging in acetate film and illustrates many packages which take advantage of this film's transparency and printing qualities. E. I. du Pont de Nemours & Co. (I-283)

AUTOMATIC JAW BAG SEALER. Bulletin on a high speed jaw bag sealing machine for cellophane, polyethylene, Pliofilm, glassine, foil and other heat sealing papers and plastics. Available with automatic labeling device. Amsco Packaging Machinery, Inc. (I-284)

FILLING MACHINES. Bulletin on a universal vacuum, gravity and pressure filling machine with stainless steel valves for filling all types of solutions in bottles, jars and cans. Perl Machine Mfg. Co. (I-285)

"DAY-GLO" COATED PAPER. Bulletin explains the licensing procedure connected with the use of fluorescent "Day-Glo" coated paper. Switzer Brothers, Inc. (I-286)

PROTECTIVE PACKAGING ACCESSORIES. Bulletins on a silica gel and chemical dispenser, air extractor for bags, cubic content calculator and cargo striper and corner marker. Cargo Packers Inc. (I-287)

POLYETHYLENE AND CELLOPHANE BAG MAKING MACHINES. Details on two fully automatic machines for making flat and gusseted bags from polyethylene, Pliofilm, cellophane and other heat sealable films. Roto Bag Machine Corp. (I-288)

BOX SEALING WITH "SCOTCH" TAPE. Folder tells how six "Scotch" brand pressure sensitive tapes can be used for box sealing tasks. Table lists the properties of these tapes which are engineered for box sealing applications. Minnesota Mining and Mfg. Co. (I-289)

DEFENSE MANUFACTURING FACILITIES. Booklet explains how the facilities of the Richmond, Indiana plant are being adapted for numerous types of defense manufacture. Aluminum Seal Co., Inc. (I-290)

SILICONES. Brochure explains what Silicones are in terms of their use in polishes, water repellents, release agents, lubricants, defoamers, protective coatings, and electrical insulation. Dow Corning Corp. (I-291)

COLLAPSIBLE TUBES. Booklet contains much helpful data on types of tubes, tube sizes, closures, spouts, pipes, and metals available. Standard Collapsible Tube Co. (I-292)

PACKAGING MACHINES. Folder contains details on "Bar-Num Auto Check" weighers and automatic bag feeders, openers and weighers, plus testimonials from users. B. F. Gump Co. (I-293)

ROLL CHANGING. Description of "The Kohler System" for changing unwind and rewind rolls of web material without reducing the speed of the process. Dilts Machine Works, Div. The Black-Clawson Co., Inc. (I-294)

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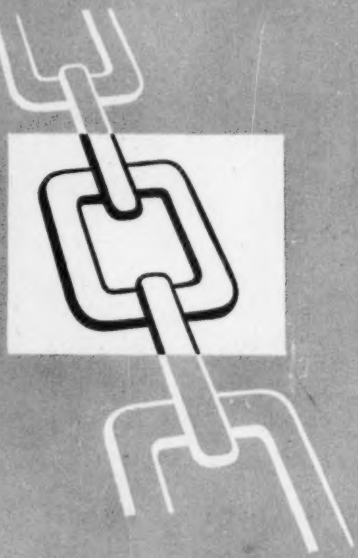
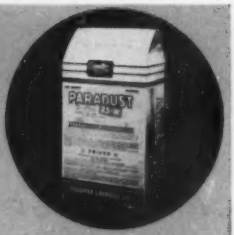
OVER 100 DIFFERENT MACHINES FOR AUTOMATIC PRODUCTION

weak link?



DUO-TITE . . . . . ▸

the perfect "No-Sift" bag. Ideal for insecticides, fertilizers, chemicals, any products which must be packaged in siftproof containers. Its sturdy construction combines special liners with folding, gluing and heat-sealing.



THERMOSEAL . . . . ▸

the bag with 20% more protection. It's a fact. There is 20% more protection in Betner's THERMOSEAL than in other closures. Eliminates staples. Insures water-vapor protection, siftproofness, and retention of flavor.

LAMOFILM . . . . . ▸

the bag with extreme moisture-impregnability. Locks moisture out. Protects freshness, flavor, goodness of food by a patented film of rubberized compound held firmly in suspension between two layers of glassine.

FLAV-O-TAINER . . . ▸

the bag with vacuum-packed freshness. Pliofilm* lined, all inner seams are hermatically sealed. Replacing air with inert gas, and sealing top, FLAV-O-TAINER becomes an airtight unit. Used whenever freshness is a must.

*Mfd. by Goodyear T. & R. Co.

Betner's service is complete . . . from idea to finished bag. Let Betner recommend the proper machinery for closing bags and inserting liner bags in cartons.

NO SIREE! Packaging need never be the weak link in your distribution chain if it's Betner engineered. No matter what the packaging problem—design, production or sales appeal—Betner's skilled technicians and their years of experienced "know-how" have been producing outstanding and fool-proof bags for thousands of satisfied clients. May we help you with your problem? Drop us a line.

Whatever the packaging need, there's a Betner bag...FILL IT!

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PLANTS ALSO LOCATED IN:
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VIALS and TUBES

Pack your Products with These Advantages

Minimum package weight
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Unlimited colors
Savings in labeling
Savings in handling
Savings in shipping

These modern plastic containers come in sizes from ¼" to 1¼" in diameter and lengths up to 6". Cork, slip-on, or screw-cap closures. Write for details and samples today.

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Container Company, Inc.
10 West Parker Avenue
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METHODS

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FOR MARKING PRODUCTS, PARTS, PACKAGES, TAPES, TAGS, LABELS

Markem Methods are engineered to solve *specific* marking problems. The proper combination of a Markem marking *machine*, Markem *type* and Markem *ink* is matched to the individual requirements. Not only are the properties of the surface itself considered, but also local conditions of temperature and humidity together with your own handling techniques during production, storage and packaging. That is why it is so important that the Markem Method be followed completely.

When you have a marking problem, ask Markem about it. Send a sample of the item to be marked and details of your needs. Markem engineers have worked out practical solutions for many manufacturers. MarkeM Machine Company, Keene 1, N. H.

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For your information

R. C. Cragg of Chicago, regional manager of **Gould-National Batteries, Inc.**, and a director since 1947 of the **Society of Industrial Packaging & Materials Handling Engineers,** is general chairman of the SIPMHE seventh annual **Protective Packaging & Materials Handling Exposition,** which will be held Oct. 14-16 at Chicago's Coliseum. During the Exposition, the Society's **Seventh Annual Short Course** will be presented, sponsored jointly by SIPMHE and the University of Illinois, with all sessions to be held in the Coliseum. The course will feature four of the university's engineers and economists: **Dean William L. Everitt** of the college of engineering; **Prof. Charles H. Sandage,** specialist in marketing; **Prof. Leo Pigage** and **Associate Prof. Larry Doyle.**

R. C. Cragg

A Graduate Course in Package Engineering is to be offered for the second year by **Columbia University's Department of Industrial Engineering.** The course begins Oct. 1, and consist of 15 weekly lectures given Wednesday nights, 7:10 to 9:00 p.m. at the School of Engineering Bldg., 117th St. and Broadway, New York. Tuition is $50, plus a $7 registration fee. A course outline is available and information may be had by calling University 5-4000, Ext. 391, after Sept. 22.

Following are some of the guest lecturers: **Dr. K. W. Brighton** and **T. E. Dobbins,** American Can Co.; **Walter J. Byrd,** Standard Brands, Inc.; **C. T. Cackley,** National Wooden Box Assn.; **Victor L. Hall,** Glass Container Mfrs. Institute; **J. D. Malcomson,** Robert Gair Co., Inc.; **Glenn Mather,** Continental Can Co. and Fibre Drum Mfrs. Assn.; **Paul H. Paulsen,** Wm. H. McGee & Co., Inc.; **Frank Pocta,** Paper Shipping Sack Assn.; **Earl R. Stivers,** Package Research Laboratory; and **George W. Todd,** Container Div., Jones & Laughlin Steel Corp.

The 1953 Packaging Exhibition in Great Britain is scheduled to be held in Olympia Hall, London, England, opening Jan. 20, 1953, and running through Jan. 30. **The Institute of Packaging** in Great Britain is sponsoring the exhibition in collaboration with **Provincial Exhibitions, Ltd.** A number of leading British machine and materials manufacturers have already booked exhibit space and it is expected that the exhibit hall will be completely filled. Communications regarding the 1953 Packaging Exhibition in Great Britain should be addressed to Exhibition Office, City Hall, Deansgate, Manchester, England.

"Paper and People" is a new booklet produced by the **Mead Corp.,** Dayton 2, Ohio, for the purpose of acquainting its stockholders, customers and suppliers with the scope of the company's operations. The booklet, which is illustrated by a *Life* photographer, pictures the firm's papers and boards in use throughout American business and the company's plants, equipment and personnel at work.

The Produce Prepackaging Assn. elected the following officers at its recent annual meeting: president, **C. W. Marvin** of C. W. Marvin Co.; first vice president, **John M. Baer** of Baer Bros.; second vice president, **J. William O'Donnell** of Suffolk Farms Packing Co.; treasurer, re-elected for the third consecutive year, **William Lee Duvall** of E. L. Duvall & Son, Inc.; and re-elected secretary, **Robert A. Cooper** of Stamford, Conn.

Everyone having an interest in so-called aniline printing is invited to voice an opinion concerning three new names for this process. The Aniline Printing Committee of the **Packaging Institute** has proposed the following names: "flexographic process," "permatome process" and "rotopake process." Those interested are asked to choose the best of these names or to offer their suggestions. "Votes" should be sent to **John Cozza,** Chairman, Aniline Printing Committee, Packaging Institute, 342 Madison Ave., New York.

"Engineering the Air Removal from Canned Foods" is the 29th in a series of research bulletins issued by the Research Division of the **Continental Can Co.,** 100 E. 42 St., New York 17. The 12-page booklet discusses the development of vacuum closure in canning lines and describes recent trends in this field. The material was originally presented at the 1951 Spring Meeting of the American Chemical Society, Boston, Mass., and is by **J. M. Boyd, J. M. Heinen, Jr.,** and **F. W. Parrin,** all of Continental Can's Research Division.

Of interest to packers of tomatoes and tomato products is another booklet in the same series, No. 30, titled "Mold Counting of Tomato Products," prepared by **V. S. Troy** of Continental Can Co.'s Research Division.

The 1952 winner of the annual advertising award made by the **Detroit Art Directors Club** was the **Champion Paper & Fibre Co.,** Hamilton, Ohio. Exhibited in the trade-paper color-photography class, the winning advertisement was a four-color insert demonstrating the printing performance of Champion's Kromekote.

Carl F. Dietz, president of **Lamson Corp.** of Delaware, manufacturers of materials-handling equipment, recently addressed the **New York Society of Security Analysts.** He reported that his company has "materially enlarged" its marketing division in preparation for anticipated growth in industry's use of conveyors.

The European Federation of Corrugated Carton Manufacturers (Fédération Européenne Des Fabricants De Carton-Ondulé) was recently created during the Congress of European Manufacturers which took place at Santa Margherita Ligure, Italy, in March. The purpose of this federation is to study the economic, financial and technical problems of interest to producers of corrugated board, with the aim of bringing about progress and development of this industry. **Dr. Enrico Crespi** of Italy was elected president of the Federation. The organi-

What's doing

Sept. 11-14—**Packaging Machinery Mfrs. Inst.,** 20th annual meeting, Homestead, Hot Springs, Va.

Sept. 14-17—**National Automatic Merchandising Assn.,** Palmer House, Chicago.

Sept. 14-16—**National Frozen Food Locker Institute,** Omaha, Neb.

Sept. 15-18—**New York Premium Show,** New York.

Sept. 21-24—**Philadelphia Gift Show,** Hotel Benjamin Franklin, Philadelphia.

Sept. 22-26—**American Butter Institute,** Drake Hotel, Chicago.

Sept. 22-26—**Dairy Industries Supply Assn.,** Sherman Hotel, Chicago.

Sept. 25-27—**National Assn. of Ice Cream Mfrs.,** La Salle Hotel, Chicago.

Sept. 28-Oct. 2—**Master Brewers Assn. of America,** Hotel Roosevelt, New Orleans.

Sept. 29-Oct. 1—**National Electronics Conference,** Chicago.

Sept. 29-Oct. 1—**American Management Assn. Personnel Conference,** Hotel Astor, New York.

For Faster Packing
Safer Handling
Lower Shipping Costs

You'll pack fragile articles faster in BAKELITE Phenolic Foamable Resin—just push them gently into a block of this soft, dry foam!

The foam reduces danger of breakage, is non-flammable, has good thermal insulating properties for perishables. It keeps its favorable packing properties even when soaked with water.

With a density of only .3 to .4 pounds per cubic foot, BAKELITE Phenolic Foamable Resin is the lightest packing material available—its weight only one-tenth that of ordinary shredded paper. It's easy to handle, reduces worker fatigue. And it cuts package weight as much as 60%!

What's more, you can make it right in your own plant from a liquid resin that changes to foam with 200 times the original volume. Prepare the foam as you need it, saving valuable space.

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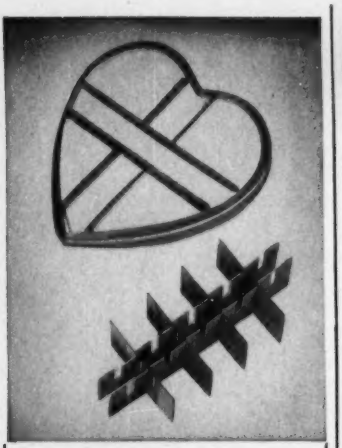

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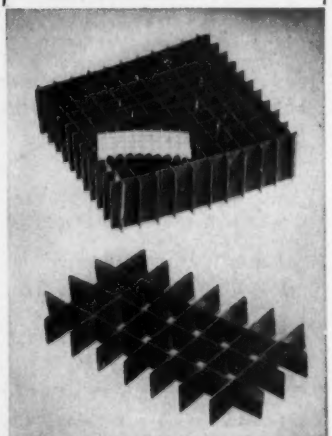


For your information

zation's mailing address is 36 Rue de Chateaudun, Paris 9, France.

H. C. Davis

The Industrial Bag & Cover Assn. at its annual meeting in Homestead, Va., elected the following new officers: president, **H. C. Davis,** manager of the Bemis Bro. Bag Co. paper specialty plant at St. Louis, Mo.; vice president, **S. G. Yount,** president of the Southland Paper & Converting Co., Los Angeles; **P. O. Deitsch,** secretary, treasurer and administrative officer.

The second **Padua Packaging Conference** was convened recently in Padua, Italy, by the **Italian Packaging Institute** (Istituto Italiano Imballaggio). Among topics discussed was the widespread use of aluminum in the tinned-food industry and the research in progress toward still larger use of this metal as a replacement for wooden boxes and casks. The difficult task of standardization of package sizes and types was also discussed. It was stressed that the supply of wood, particularly poplar wood, has become "a real national problem" and study of alternate materials was called for.

The Pfaudler Co., 1000 West Ave., Rochester 3, N. Y., fabricators of glassed steel equipment for the process industries, has announced establishment of an unrestricted $45,000 Pfaudler Endowment Fund at the University of Rochester, in recognition of the fact that a university, ". . . . like a business enterprise, must have unrestricted resources on hand" to meet changing needs.

The National Flexible Packaging Assn., made up of converters of packaging papers, recently held a Marketing and Sales Training Conference at the Hotel Biltmore, New York. Fifteen speakers made suggestions on the question: "Now that papers, films and foils are freely available, how can we sell more of them in converted forms?"

The Controllers Institute, New York, has made several appointments throughout the various branches of the organization. Elected as first vice president in their respective districts are the following: **Carl M. Blumenschein** of Container Corp. of America, Chicago; **Claiborne H. Johnson** of Fleming & Sons, Inc., Dallas, Tex.; **Ralph B. Knott** of Fibreboard Products, Inc., San Francisco. Elected directors of Institute Controls are **Roe S. Clark** of Package Machinery Co. and **Cover B. Newman** of Crown Cork & Seal Co., Inc.

"Technology of Coated and Processed Papers" is the title of a new book published by Remsen Press, 212 Fifth Ave., New York 10. The 736-page volume costs $15 per copy. Features listed by the publisher include ". . . . . the basic information needed for entering almost every branch of the specialty-converting field." The book is edited by **Robert H. Mosher,** general manager of the **Miami Valley Coated Paper Co.**

Fifty years of continuous publication has been celebrated by **"Bagology,"** the pocket-size bimonthly booklet sponsored by **Chase Bag Co.,** 319 W. Jackson Blvd., Chicago. The external house organ carries technical data provided by Chase and human-interest material by the editor, **William Feather.**

The first international **Exhibition of Packing Materials** in Sweden is being held Sept. 6th-14th in Svenska Massan at Gothenberg, Sweden. The exhibition is arranged in three sections: an industry exhibit of new items, materials and machines; a public exhibition of well-known branded consumer items, with demonstrations of packaging methods, and a historical section, to include current American packages. For information, address Internationell Emballage Utställning, Svenska Mässan, Göteborg.

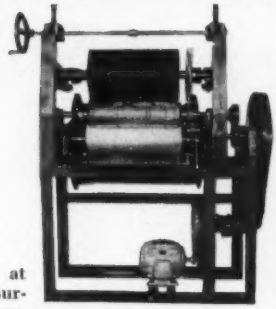
"Confab," the quarterly magazine circulated by **Acme Steel Co.,** 2840 Archer Ave., Chicago 8, Ill., uses its summer edition to describe a number of applications for steel strap, including a new cost-saving method of bracing railroad car shipments, end-stack bracing, said to cut cost of carload bracing approximately in half.

Hornung's "Handbook of Designs and Devices" has been republished, in a $1.90 paperbound issue, by Dover Publications, 1780 Broadway, New York, N. Y. This volume contains 1,836 different basic decorative designs and their variations, drawn and classified by the author, an industrial and graphic designer.

Volume 25 Index of MODERN PACKAGING is now available. Subscribers may obtain the index, covering the period from September, 1951, to September, 1952, free of charge by writing to the Editorial Department, MODERN PACKAGING, 575 Madison Ave., New York 22.

LEMBO SURFACE or ROTOGRAVURE PRESS

BEST YET IN A SMALL INEXPENSIVE PACKAGE PRINTING PRESS . . . 6" TO 36"!



Prints narrow webs at high speed by either surface method or rotogravure. Several units hooked up in series give you a compact multi-color press at amazingly low cost. Excellent for production printing or laboratory work.

Engineered and built by LEMBO . . . manufacturer of fine printing machinery for plastics, paper and textiles, up to 80" wide, 1 to 12 colors, surface and rotogravure.

LEMBO MACHINE WORKS, Inc.
248 East 17th Street Paterson 4, N. J.

PLASTIC MOLDED BOXES
OVER 100 STOCK MOLDS! NO MOLD COST!
MINIMUM SHIPMENT 1000 OF A SIZE

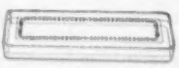
Small Heart, clear cover, opaque base, unhinged—2½" x 2⅝" x ¾

We can make a plastic box to fit your special requirements without a mold cost on sufficiently large orders.

Delivery can be spread over a period of a year.

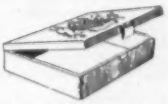
Send us a sample of your product together with price range and quantity desired. We will return your item packaged, together with full recommendations

There is no charge for this service.



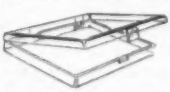
No. OWB, unhinged, clear or opaque, open wallet box and for many other purposes. September delivery, 9¼" x 8½" x ¾" and 1"

Lace Box, raised lid, hinged, opaque—7⅛" x 4⅞" x 1⅛, also ⅝" high



#30 — 3¼" x 2¼" x ⅛", hi ged

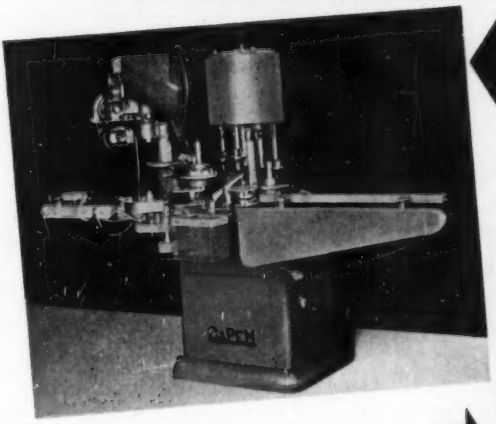
IRA HARMON CO.
41 E. 42nd St.
NY 17, NY
MUrray Hill 7-7644



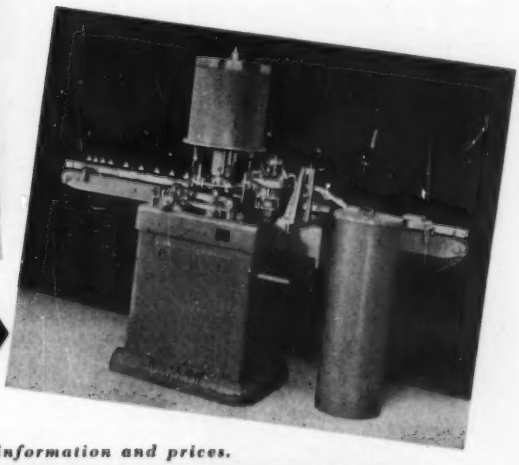
No. 8C Wallet or utility box, hinged, clear, 4½" x 3½" x x½", also lit, same size, ¾" high

No. 6—inside size, 5⅛" x 1⅞" x ⅞", unhinged, all clear or tutone

The TOP PRODUCTION TEAM for Tablet and Capsule Lines



CAPEM-Applies ALL TYPES of screw caps . . . . Fully automatic . . . . Capacities from 2000 to 10,000 an hour . . . . Delivers a leak-proof seal . . . . 1, 2, 4, 6 and 8-spindle models . . . . More in use than any other make of capper.



KOTTONER-Follows basic design of CAPEM cappers . . . . Protects sterility of wadding . . . . Quickly changed over from one size container to another . . . . Capacities from 40 to 100 containers per minute . . . . The perfect team-mate for CAPEM on capsule and tablet lines.

Write for complete information and prices.

CONSOLIDATED PACKAGING MACHINERY CORP.
1400 West Avenue, Buffalo 13, N. Y.

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Edited by H. A. Levey

Machine and Method For Applying Labels To Articles on a Conveyor, G. W. von Hofe (to New Jersey Machine Corp., Hoboken, N. J.). U. S. Re: 23,512, June 10. A labeling machine for cylindrical bottles and like articles comprising means to render adhesive one face of a label, a label delivery member with suction openings and means to transfer a separate, unitary label, adhesive side out, to the delivery member.

Cover-Fastening Means, H. M. Badger (to Landers, Frary & Clark, New Britain, Conn.). U. S. 2,599,527, June 10. Cover-fastening means for containers having an opening therein, a removable cover for said opening and a resilient gasket between the cover and the periphery of the opening.

Bag Bottom Structure, H. E. McCrery and A. E. Jesser (to Ply-fiber Container Co., Garwood, N. J.). U. S. 2,599,567, June 10. A flexible bag container, comprising a single integral blank of flexible material rolled upon itself and connected end-to-end to form a tubular body and having a multi-thickness bottom, including a pair of substantially equal rectangular bottom panels flexibly connected with opposite side-wall areas of tubular body.

Inner-Lined Folding Carton, H. Gottesman (The Permaline Co., Clifton, N. J.). U. S. 2,599,708, June 10. An inner-lined folding carton comprising a boxboard having end folding flaps, a lining applied to said board and covering said end flaps and multitudinous, separated but closely spaced thermoplastic bonds connecting said covering portions of the lining with flaps.

Stacking and Nesting Container, F. W. Schmidt (to Trustees, Tumwater Square, Olympia, Wash.). U. S. 2,599,727, June 10. An open-top container of rectangular shape and of greater length than width and having a bottom wall with side and end walls flaring outwardly therefrom, the corners between said side and end walls being rounded, having a horizontal ledge formed on the upper ends of all of said walls extending outwardly therefrom continuously around the top of container.

Shipping and Carry-Out Carton, R. E. Wolfe (to The Fairfield Paper & Container Co., Baltimore, Ohio). U. S. 2,599,800, June 10. A carton having four walls, an end structure on the carton including a flap hinged to the edge of each wall, the flaps on each of the pairs of opposite walls being identical with each other but different from the flaps on the other pair of walls, each of the flaps being provided with an inner section hinged to the adjacent wall and an outer section hinged to the inner section, each of one pair of flaps being free of slots, each of other pair of flaps being provided with a pair of slots extending from the inner hinge line.

Tube and Method of Making the Same, R. H. vonLiedtke (to McGraw Electric Co., a corporation of Delaware). U. S. 2,599,878, June 10. A tube formed of a plurality of layers of paper pulp pressed into firm contact with each other throughout their extent and wound one upon another, said tube having succeeding layers pressed into the body of preceding layers at a multitude of spaced points to stitch the layers together.

Food Package, W. L. Morrison, Lake Forest, Ill. U. S. 2,600,-069, June 10. A package for the shipment and storage of food and the like, comprising a plurality of separate rectangular metallic-foil-covered bodies, the metallic foil being sealed along opposed adjacent edges at a point far removed from the package and then folded down against the package so that each package comprises a longitudinal folded seam and a transverse folded seam at each end, said packages being assembled side by side and end to end, the folded seams on one package lying adjacent the folded seam on the other package, whereby the space between end-abutting packages equals only the thickness of the folded seam of a single package.

Dual-Purpose Envelope, J. G. Kerr, Washington, D. C. U. S. 2,600,114, June 10. A dual-purpose envelope comprising pocket-forming panels, a cover panel adhesively attached to one of said pocket-forming panels, the pocket-forming panel to which the cover panel is attached having an address thereon and a closure flap attached to one of pocket-forming panels.

Semi-Automatic Label-Applying Machine, S. T. Carter (to Geo. J. Meyer Mfg. Co., Cudahy, Wis.). U. S. 2,600,295, June 10. In a labeling machine, a transfer carrier movable along a horizontal, rectilinear path toward and from a labeling station, a picker movable back and forth to and from a magazine along a rectilinear path which intersects that of the carrier, and means for moving the picker and causing it to dwell at a transfer station, carrier registering with picker at the transfer station.

Machine For Filling Liquids In Containers In Vacuum, W. K. Cabot (to American Can Co., New York, N. Y.). U. S. 2,600,-391, June 17. A machine for filling containers with liquid contents, comprising a stationary vacuum chamber having means for vacuumizing the same, a pocket communicably connected with said chamber for confining a container to be vacuumized and filled, a liquid supply tank having a measuring chamber communicating therewith, measuring chamber also communicating with pocket for partially vacuumizing the measuring chamber through said pocket from said vacuum chamber.

Siftproof Bag Bottom, M. E. Craig (to Crown Zellerbach Corp., San Francisco, Calif.). U. S. 2,600,487, June 17. A siftproof bag bottom formed on the bottom end of a multi-ply bag tube, bag tube initially having a pair of longitudinal slits centrally spaced in the bottom end of one side wall of the outer ply and a pair of centrally spaced longitudinal slits in the bottom end of the same side wall of the inner ply, said slits in inner ply being considerably shorter and considerably nearer together than the slits in outer ply.

Paper Package, D. M. Scoville, San Francisco, Calif. U. S. 2,600,937, June 17. A carbon-paper package comprising an open-topped box having bottom, end and side supports; a stack of interleaved, generally rectangular, separate carbon and second sheets positioned therein, said sheets being in engagement with side supports and with one of end supports of box along three of their edges.

Container, G. Hammond (to Reynolds Metals Co., Richmond, Va.). U. S. 2,600,989, June 17. A method of making containers comprising: providing a sheet of unlaminated aluminum foil of a caliper not substantially less than 0.003 in. nor more than 0.005 in.; folding sheet simultaneously along two spaced, parallel lines not defined by preliminary scoring to form a front wall; then simultaneously folding sheet along two additional spaced, parallel lines not defined by preliminary scoring, to form opposed side walls and a rear wall; controlling the second folding operation to bring together in the rear wall opposite margins of the sheet in a fin normal to the plane of the rear wall, folding fin upon itself and then into the plane of the other rear wall to form a longitudinal seam and thereby a rectangular tube.

Apparatus For Packaging Materials, H. C. Hopp (to Standard Cap & Seal Corp., Chicago, Ill.). U. S. 2,601,020, June 17. In a container vacuum-sealing apparatus: a vacuum chamber and means for subjecting a flexible filled container to a vacuum while in said vacuum chamber.

Method and Apparatus For Packaging a Predetermined Weight of Food Material, E. H. Carruthers, Warrenton, Ore.). U. S. 2,601,093, June 17. A machine for packing a substantially constant weight of material in each of a series of containers comprising, in combination, a molding means for molding the material into a desired cross-sectional shape, cut-off means for cutting of a length of the material, driving elements for advancing the molding means, driving elements for actuating the cut-off means and means for varying the speed of operation of the driving elements for one of said means with relation to the speed of operation.

Dispensing Machine, W. C. Marsh (to Marsh Stencil Machine Co., Belleville, Ill.). U. S. 2,601,159, June 17. In a tape-dispensing machine, a frame, a tape-roll support, means for feeding tape and a reciprocating lever of channel cross-section hav-

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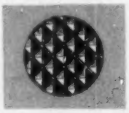

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U. S. patents digest

ing a forward feeding movement and an opposite return movement between feeding and return limits.

Packaging Means For Toy Pistols, R. O. Wesley (to Daisy Mfg. Co., Plymouth, Mich.). U. S. 2,601,192, June 17. A pair of pistols and means for packaging same, with one of pistols inverted and reversed with respect to the other, each of pistols including a grip portion and a projection extending from the bottom of the grip portion, packaging means comprising a pair of like, interchangeable cartons for the respective pistols, having openings in the bottom walls through which the grip portions of pistols project and having slots in walls longitudinally spaced from the openings, the slots in one carton being located in such a position as to receive the projection from the bottom of the pistol in the other carton.

Dispensing Milk Container, J. P. Jones (to Dairy Specialties, Inc., a corporation of Nebraska). U. S. 2,601,399, June 24. A milk-and-cream-separating container of the waxed-paper type having an outer side wall with an opening with sides converging toward the bottom and a closure hinged at the top of the opening.

Envelope, A. I. Kegan and W. A. Neely (to Samuel W. Kipnis, Chicago, Ill.). U. S. 2,601,530, June 24. A mailing sheet adapted to be used for two-way shipment between two parties, wherein one shipment comprises sending a message to one party, while the other shipment comprises sending coins or other small objects to the other party; comprising a rectangular wall portion and a foldable flap depending therefrom, dry sealing cohesive applied to corresponding areas of foldable flap and having reinforcing flap extending from an edge of wall portion.

Filling Machine With Rotary Valve, L. McGihon (to King Sales & Engineering Co., San Francisco, Calif.). U. S. 2,601,542, June 24. In a filling machine, a rotary filling valve having respective series of alternately arranged, circumferentially spaced valve-opening elements and valve-closing elements, said respective series being staggered axially of the valve with all of the plurality valve-opening elements lying in substantially the same plane and all of the plurality of valve-closing elements lying in substantially another plane displaced axially of said first-mentioned plane and having means for moving the valve along a path.

Closure For Flexible Tubing, P. Sussenback and C. J. Young (to The Presstite Engineering Co., St. Louis, Mo.). U. S. 2,601,568, June 24. A closure for the end of a length of thin flexible sheet tubing or the like, comprising an elongate rod of substantially circular cross-section around which the end of the tubing is flattened and doubled.

Machine For Inserting Handles In Cartons, L. E. Arneson (to Morris Paper Mills, Chicago, Ill.). U. S. 2,601,816, July 1. A machine for inserting carrying handles in collapsed cartons having openings therein adapted to receive handles, comprising a carton-selecting member to separate individual cartons from an accumulated stack of cartons, for simultaneously feeding cartons and handles into position with respect to each other so that the openings are in alignment with handles.

Cigar-Wrapping Machine, W. J. Giles (to Tobacco Machine Supply Co., Inc., a corporation of New Jersey). U. S. 2,601,856, July 1. In a cigar-wrapping machine, a main frame, a wrapper-supporting die thereon, a bunch carrier reciprocable from a loading position to and over said die and including a frame having means for rotating a bunch in the direction for winding a wrapper thereon, a tucking-needle mechanism including a rod mounted between its ends for rotation.

Label and Foil Wiping Apparatus, A. C. Tess (to Edward Ermold Co., New York, N. Y.). U. S. 2,601,934, July 1. In a machine for labeling objects, conveyor means for moving objects through the machine, means for wiping a label upon a surface of the object, including a wiper element, a mounting for wiper element permitting rotar movement thereof about an axis.

Packaging Apparatus and Method, H. Hansen (to Fewel Bros. Packing Co., Fresno, Calif., a co-partnership). U. S. 2,601,944, July 1. An apparatus for measuring and setting the contents of containers each of which includes side walls and an open top with a top closure in upward extension of one of said side walls and which contents is in the form of relatively small discrete objects, a conveyor for supporting a row of such containers

upright thereon for movement longitudinally of said row in one direction in a generally horizontal path of travel, having a filler along said path for filling said containers.

Container With Water-Shedding Top Construction, C. G. Preis (to American Can Co., New York, N. Y.). U. S. 2,601,945, July 1. A container for liquids comprising a tubular fibre body terminating in a peripheral flange, a fibre top member having its marginal edge portions secured to body flange in an end seam, top member inside of end seam being formed with a domed panel disposed above the top plane of the major portion of end seam.

Dry Or Pressure-Sealing Envelope, V. E. Heywood (to United States Envelope Co., Springfield, Mass.). U. S. 2,601,946, July 1. A dry or pressure-sealing envelope of two-piece construction, one piece being constituted by an envelope body having a closure flap and the other piece being a single strip folded to the three-thickness form and providing two complemental coatings of dry-sealing material in insulated relation, said folded strip being adhesively connected to both body and closure flap.

Machine For Making Laminated Paper Tubes, R. H. von Liedtke (to McGraw Electric Co., a corporation of Delaware). U. S. 2,602,382, July 8. A machine for forming tubes from fibrous pulp or other fibrous material comprising means for feeding pulp in a thin sheet, a mandrel adapted to receive the sheet of pulp, means for rotating mandrel to wind the sheet into a tube having a plurality of layers, means for pressing each succeeding layer against a preceding layer, a stitching roller adjacent mandrel provided with a multitude of spaced projections and means for forcing stitching roller against the tube while it is being formed.

Method Of Making Paper Containers, C. Barbieri (to Dixie Cup Co., Chicago, Ill.). U. S. 2,602,383, July 8. The method of making a paper container which consists of wrapping a blank around a conical mandrel and around a flanged bottom, with the ends of the blank overlapping, securing the outer end to the overlapped portion of the wall and the container wall to the flange of the bottom, folding the bottom edge of the wall of the container so formed inwardly and upwardly against the bottom and forcing the container wall inwardly above the flat surface of the bottom.

Bottle-Handling Apparatus, J. B. Hutaff (to Julian's, Inc., Fayetteville, N. C.). U. S. 2,602,555, July 8. A bottle-handling apparatus for simultaneously unloading from a case a group of necked bottles arranged in rows and suspending, and for feeding the bottles in upright position in said apparatus, apparatus comprising a frame, a series of pairs of spaced longitudinal slide rods mounted in frame in downwardly inclined relation from their forward ends, each pair of longitudinal slide rods being so spaced as to engage projections on the necks of the bottles to suspend the bottles slidably thereon.

Venting Closure and Liner Therefor, E. L. Dryer (to Armstrong Cork Co., Lancaster, Pa.). U. S. 2,602,559, July 8. In combination with a container, a venting closure including a shell having means for affixing the closure to a container and a liner adhesively secured thereto, liner including a relatively thick and compressible backing.

Apparatus For Registering an Article With a Label-Applying Element, S. T. Carter (to Geo. J. Meyer Mfg. Co., Cudahy, Wis.). U. S. 2, 602,561, July 8. A labeling machine which includes a movable label-applying device, means for moving the applying device thereby to apply a label to an article and, in combination therewith, means comprising; spaced, relatively movable article-engaging parts operative to orient an article while the article is within the field of action of the applying device and means for actuating said parts.

Apparatus For Packing Materials, E. H. Carruthers, Warrenton, Ore. U. S. 2,602,578, July 8. A machine for packing materials in a container comprising, in combination: a stationary frame structure, a pair of turrets mounted one above the other on frame structure, a member having a plurality of material-receiving measuring chambers mounted between turrets, member being circular in shape and constituting a material-receiving turntable.

Carton, W. T. Stearn (to Celanese Corp. of America, a corporation of Delaware). U. S. 2,602,581, July 8. A carton for the reception of yarn packages comprising a rectangular bottom portion, a section folded to form the sides and covers of the cartons attached to each longitudinal edge of bottom portion and a section attached to each of the lateral edges of bottom portion, each of latter sections being folded to form an end wall of carton and fully walled compartment, compartments being spaced with respect to one another to form therebetween a space walled on two sides only.

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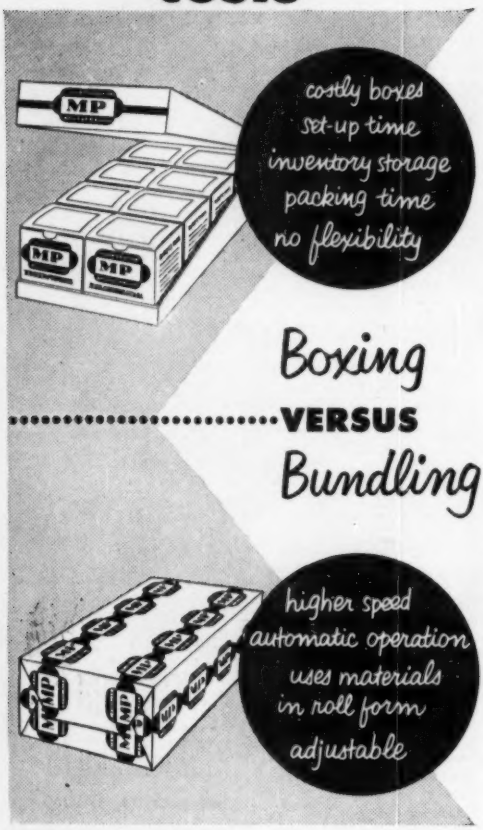

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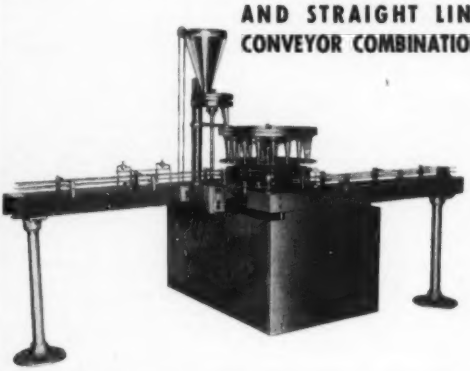

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Transport trials of paper bags

(This article continued from page 159)

equivalent of Bag C, also compares well with it.

It now remains to compare the results obtained in the transport trials with those produced by laboratory drop tests and the strength (by the various methods) of the paper as normally measured. This has been done in Table VII by placing the bags in order of merit as shown by the various tests.

It can be seen from Table VII that both types of drop test gave results agreeing closely with those of the transport trials. From the drop tests alone the choice of bag would have been between Bag A and Bag C, and on a cost basis Bag C would probably have been selected. This was the best bag found in the transport trials. With the paper tests, Bag C never occurs in the first three places, but Bag D, one of the worst bags in the transport trials, is three times in second place.

The lack of correlation between the paper-strength tests and the transport trials is of special interest because these tests are widely used in choosing paper for making bags. It is undoubtedly due to the fact that in the usual paper tests the rate at which stresses are applied is low compared with the rate at which bags are stressed in service and in drop tests. It is known that under shock rates of loading paper often exhibits properties very different from those observed at low rates of loading (3).

It was gratifying, however, to find that the laboratory drop tests satisfactorily simulated transport conditions and evaluated bags with much less expenditure of labor and time.

TABLE VII—ORDER OF MERIT OF BAGS BY DIFFERENT TESTS

	Drop tests			*Paper-strength tests*				
					Tensile		*Tear*	
Placing	*Transport trials*	*Breakage height*	*Repeated drop at 2 ft.*	*Burst*	*Machine direction*	*Cross direction*	*Machine direction*	*Cross direction*
1	C	A, C	A, C	F	A	F	E	G
2	A, E	–	–	D	D, E, F	D, E	A, F	A, E
3	–	E	E	A, E	–	–	–	–
4	B, F	B, F, G	B, F	–	–	B, C	D, G	F
5	–	–	–	B, C, G	C	–	–	D
6	D, G	D	D, G	–	B, G	A, G	C	C
7	–	–	–	–	–	–	B	B

References

(1) Railway Clearing House, General Classification of Merchandise, R.C.H. 60002/2, Jan., 1946, as amended Sept., 1947 (London: Railway Clearing House).

(2) First Report of the Paper Testing Committee of the Technical Section of the Paper Makers' Assn. of Great Britain & Ireland, 1937 (London: Paper Makers' Assn. of Great Britain & Ireland).

(3) Steenberg, B., *Svensk Papperstidn.*, 1947, **50**, 127, 346.

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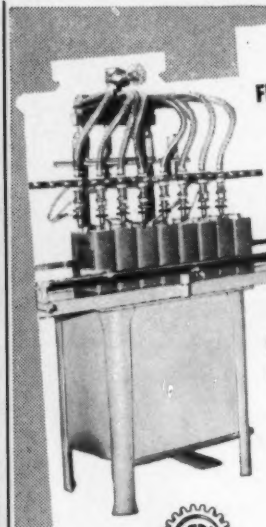

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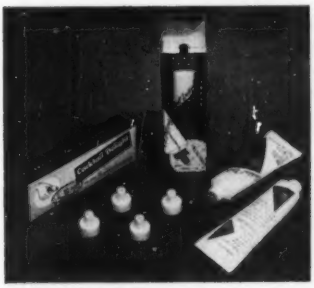
Food in polyethylene collapsible tubes

Cheese spreads are now being marketed in polyethylene tubes, similar in shape to the familiar metal collapsible tube. The package uses a dispenser cap which shapes the cheese as it comes out into a strip with a fancy cross section. The tube was developed for Sue Ann Food Products Corp., Chicago, and is the result of two years of development work by Milton Brav, vice president of the company, in cooperation with a leading producer of polyethylene containers and Morris Braun of Chicago. An increase in the sales volume is attributed directly to the new package. Mr. Brav emphasizes the point that, although work on the new container was encouraged by a tight supply situation on the pure tin tubes formerly used, the plastic tubes offer unique advantages of their own and are not just a temporary expedient.

POLYETHYLENE TUBES for cheese spread are bent double or rolled up to dispense all of contents; with pressure released, they go back to original shape.



INSTRUCTIONS for using the tube, suggestions for serving cheese are silk screened on back panel of tube. Photo shows four shapes in which polystyrene caps are molded to shape dispensed cheese. Wax-coated cellophane inner disk provides sanitary seal.

Outstanding among the features of the new plastic tubes is the fact that they are form-retaining and do not twist, flatten or curl up, even after the contents have been wholly or partly exhausted, but instead retain a smooth, new appearance. They lose none of their sales appeal through normal impacts of shipment or through customer handling of displayed tubes in stores. This has eliminated a major source of lost sales.

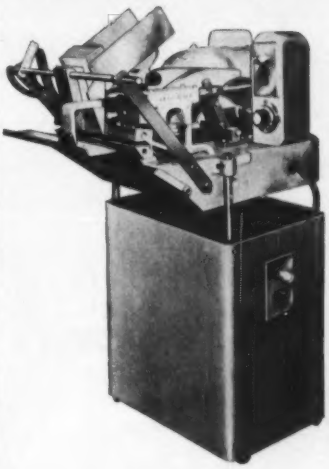
Other advantages are inertness of the material, which permits direct contact with delicately flavored food products; no inner coating for the tubes is needed. Light weight makes them economical to ship and until the seal is broken by the user, the package requires no refrigeration. These seamless-tube containers are 5¾ in. long including closure, have an outside diameter just over 1¾ in. and hold 2½ oz. of cheese spread. They are blow molded of French grey polyethylene to a wall thickness of 1/32 in. Filling is through the open bottom, which is then crimped and heat sealed.

The polystyrene caps are really open-end dies for shaping the cheese as it comes from the tube. A disk of wax-coated cellophane, which the open cap holds tightly against the mouth of the tube, seals the opening; this is removed before use. An opened tube has no tendency to extrude its contents because of the shape-retaining quality of the material, so partly used tubes stored under refrigeration require no re-seal.

Labels for the tubes are silk screened by the molder in colors such as red for sharp cheese, blue for Roquefort, etc. Cap styles and cap colors are assorted at random. Packing is in individual folding cartons with a die-cut opening in the front panel to show the tube. The carton's top side flap is extended the width of the package and die cut to hold the tube securely by its cap. The tubes are also packed in five varieties to a counter display carton.

CREDITS: *Tubes, W. Braun Co., Chicago, representing the Elmer E. Mills Corp., Chicago. Caps, Braun-Hobar Corp., Milwaukee, Wis. Individual cartons and counter display cartons, American Colortype Co., Chicago.*

LABELS on BAGS



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with the only

CONTROLLED VACUUM LABEL FEED*

feeds **folds**
positions **seals**

- Folds the label exactly in half or long and short
- Places it on the bag and seals them both, in a single automatic operation
- Labels applied neat and straight —fingertip control
- For cellophane, polyethylene, barrier material and all other thermoplastic bags
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your competitor who wraps with this machine, betters your packaging production

The perfect wrapper for:-

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- FOODS AND BAKERY PRODUCTS
- SOAPS • TISSUE HANKIES
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- BANDAGES, CAMERA FILM
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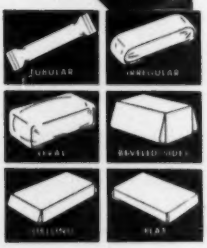

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Manufacturers of: Aniline and Gravure Presses, Folders, Interfolders, Laminators, Waxers, Embossers, Slitters, Sheeters, Roll Winders, Packaging Machines, Creepers and Tissue Converting Units.

Hardware

(This article continued from page 105)

ing on the counter and a transparent acetate cover to give complete visibility. All details have been carefully thought out to provide just the right touch of humor to accompany this very useful gift. An insert card carries the following rhyme:

"At long last and for pity's sake
Mother gets an even break
To all the family be it known—
Hands off; these tools are
Mother's Own."

J. Wiss & Sons Co., manufacturers of shears, put out an equally interesting gift package of garden tools, combining in a transparent window box three types of clippers needed for hedge, grass and shrubbery around the home, together with a book on "How to Prune," plus a pair of work gloves. This assortment has been an outstanding gift set for several years.

Henry Disston & Sons, Inc., Philadelphia's 112-year-old saw and tool manufacturer, introduced a 1952 Hardware Week special consisting of a light-weight hand saw and a 12-in. compass saw with reversible blade packed together in an eye-catching orange-colored kraft set-up box—making an attractive gift set promoting a combination unit sale.

A particularly attractive set idea has also been adopted by Utica Drop Forge & Tool Corp. for its assortments of three adjustable wrenches. The wrenches are most attractively recessed in die-cut platforms in a set-up box with paperboard base and transparent acetate cover so that the product is completely visible. The over-all design of the company trademark printed on the box covering for the base provides a most interesting effect and quickly associates brand name with product. By including different wrap-around labels with each box, the company supplies the dealer with special gift-promotional material. One sleeve called attention to a special price for Hardware Week; another promoted the wrenches as a Father's Day gift.

In the hardware field, as elsewhere, the manufacturer has many opportunities to attract the shopper to his product by the re-use advantages of the package. A particularly interesting example is the corrugated carry-home container for Claw automobile tire chains. The package, with its carrying handle, serves not only as

a convenient unit for the shopper to buy and take home, but is a continually useful container in which to store the chains neatly in the car trunk.

The Wooster Brush Co. has devised a clever re-usable package for its Deluxe Roll-On-Painter. The metal-edged telescope box is designed so that the base may be turned into a slanted paint tray that is very practical for roller painting. The box is made of very heavy kraft board, coated with a material reported to make it solventproof to liquids normally used in the process of painting.

Further study of hardware packaging will indicate that this field has advanced tremendously in the last few years. Manufacturers selling in this market or contemplating entering it will discover that they must use all the ingenuity and available knowledge of self-service packaging techniques to meet the rapidly growing competition in these markets.

CREDITS: *(Where available—identified by photo-caption numbers): 1. Cartons, Paperbox Corp., Oakland, Calif. 2. Cartridges, Extruded Plastics, Inc., Norwalk, Conn. 3. Box, Wienman Bros., Inc., 3620 W. Grand Ave., Chicago, Ill. 4. Plastic bags, A. M. G. Products Co., Pittsburgh, Pa.; saddle labels, Thompson Press, Pittsburgh, Pa. 5. Box, Superior Paper Products Co., Pittsburgh, Pa. 6. Design, Kunz & Veltri, Buffalo, N. Y.; carton, F. M. Howell Co., Elmira, N. Y. 7. Cellophane packets, Shellmar Products Corp., Mt. Vernon, Ohio. 9. Labels, Hyde Bros., Marietta, Ohio; tape, Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn. 10. Bags, Milprint, Inc., 4200 N. Holton St., Milwaukee 1, Wis., using Goodyear Pliofilm. 11. Display, Milprint, Inc. 12. Display, Capex, Inc., Evanston, Ill. 13. Design, Gerald Stahl Associates, 12 E. 46th St., New York 17, N. Y. 15. Molded-pulp display, Animal Trap Co., Lititz, Pa. 16. Display and individual cartons, Sample-Durick Co., Inc., Chicopee, Mass. 17. Design, S. Taylor Leavitt & Associates, Inc., 211 E. Superior St., Chicago 11, Ill.; package, Acme Paper Box Co., 5900 E. State St., Chicago. 18. Labels, Arrow Press, 424 W. Walnut St., Milwaukee 12, Wis. 19. Box, National Metal Edge Box Co., Callowhill at 12th St., Philadelphia 23, Pa. 20. Box, The Hinde & Dauch Paper Co., 407 Decatur St., Sandusky, Ohio. 21. Metal case, W. A. Parsons Co., Durham, Conn. 22. Box, H. J. Mills Co., Bristol, Conn.; vinyl case, S. I. Jacobson Mfg. Co., 1412 S. Wabash Ave., Chicago, Ill.; box with acetate cover, H. J. Mills Co. 23. Window box, Keystone Folding Box Co., 367 Verona Ave., Newark, N. J. 24. Package, Stanton Paper Box Co., Inc., Oneida, N.Y.*

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People "Reach Out"
For Packages that "Stand Out"
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GOLD AND PLATINUM PAPERS
Give your product a "magnetic personality" with Old Tavern Gold and Platinum Papers for label, seal and box work.
They add sparkle that sells — a smart dignity that means quality — a beauty that makes palms itch and purses open.
Old Tavern is a quality metallic at a surprisingly reasonable price. However, even if it cost twice as much it would be worth every penny because Old Tavern makes your product an "eye-catcher" instead of a "dust-catcher" . . . regardless of shelf position.
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SMOOTHER FINISH
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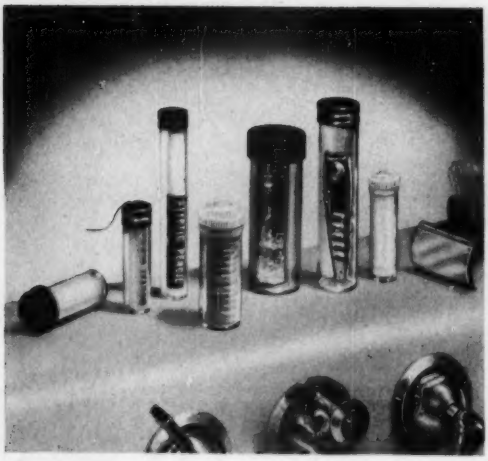

YOUR PRODUCT BELONGS *HERE*

Products that linger on dealers' shelves profit nobody. Bring them home by packaging in the container that will attract customers and prospects. Package in Lermer Plastic Containers, the vehicle that offers the utmost in eye appeal, protection and long life. Even after the contents have been consumed, the containers are re-used for other purposes and your name remains with your customers as a reminder for additional purchases. You have proved that you use the finest package available and the cost to you is no more than ordinary packaging.

CONSIDER THESE UNEXCELLED ADVANTAGES OF LERMER PLASTIC CONTAINERS.

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Write for complete catalog information and samples. Detail your problems and let our creative staff help. Lermer is famous for Experience, Service and Creative Engineering.

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PIONEERS AND PACESETTERS IN PLASTIC PACKAGING

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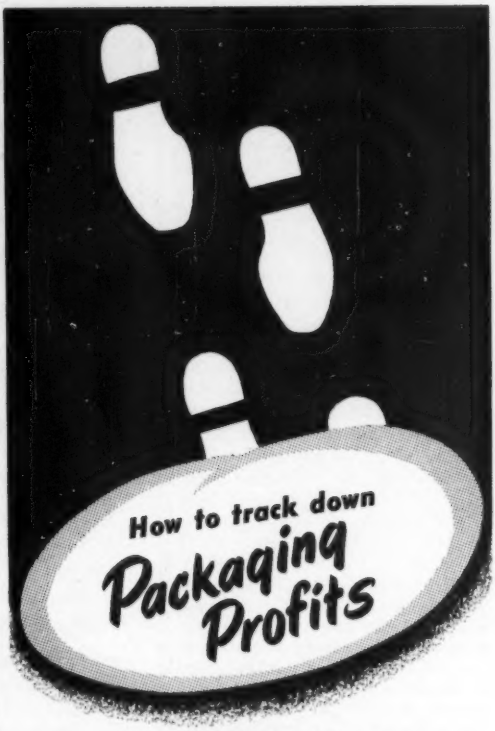

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You take a big step toward reducing packaging costs and increasing profits by investigating Triangle methods and equipment.

On installation after installation, Triangle has effected 20% to over 60% savings in time, manpower and effort . . . with the use of machines like the Triangle ELEC-TRI-PAK, auger packer, net weighers and other dry or semi-viscous product fillers.

Triangle ELEC-TRI-PAK reduces costs up to 60% or more.

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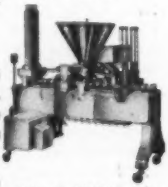
Your new Triangle equipment pays for itself—out of profits you earn. Besides, you may use the valuable Pay-As-You-Package Plan when you install Triangle equipment.



Triangle-BAGBY dairy filling equipment cuts costs in half.

These are unusually good reasons to investigate Triangle methods and machines *today*.

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Hard-to-fill answer

(This article continued from page 148)

drawing boards and is intended for use in frozen fruit and vegetable packaging. This project is being undertaken in cooperation with a frozen-food packer and grew out of experiments in which the fish-package filler was tried out on other food products. The 180-packages-per-minute rate expected from the vegetable packaging machine should be compared, Mr. Hopkinson says, with the semi-automatic revolving table rigs now used by some frozen-food packers. One of these circular "lines" is said to be able to turn out about 90 cartons a minute, with 11 employees filling and check weighing.

Coincidentally with its perfection of the automatic fillet packer, Atlantic Coast Fisheries has developed a new aluminum foil wrapper. Previous wrappers backed up the foil with a double lamination of tissue between which was a layer of wax. Heat in the sealer caused the wax to flow through the inner layer of tissue to effect the seal. This liner had a tendency to stick to the fish when the package was unwrapped and it was necessary to use a cellophane wrap between fish and foil.

The new wrappers, originally conceived by Gordon Howell of Atlantic Coast Fisheries, use a 25-lb. kraft layer laminated to the foil and the wax is placed on the surface of the paper so that it is right next to the fish. A microcrystalline wax is used, requiring a somewhat higher sealing temperature, and to be absolutely certain that the waxed inner ply will not stick to the fish, it is treated with a powdered parting agent.

With this new wrapper, the cellophane layer between fish and wrapper can be eliminated. Even with the tightly pressed wrap, needed to avoid air spaces within the package, no sticking occurs. The same new wrap has been used on some experimental test runs of hamburger, cut green beans and spinach which were put through the new machine and sticking was eliminated in these tests as well.

CREDITS: *Foil wrappers, Canada Foils, Ltd., 7 Fraser St., Toronto, Ont., Canada, and Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky. Waxed trays, Gair Co., Canada, Ltd., and Container Corp. of America, 38 S. Dearborn St., Chicago 3, Ill.*

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Chaspec's fancy-free packages and displays have been proved in use by leading merchandisers throughout the country.
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Fine Packages and Displays . . . Since 1920
three dimensional displays moulded plaques point of sale merchandisers
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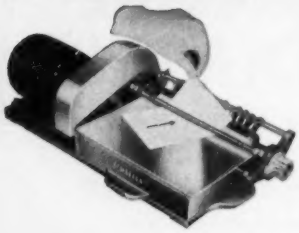

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SAVE 35% LABOR. Speedy machine-gluing instead of slow brush-daubing. Round, square and die-cut labels glued. No adjustment except for glue coating. Ideal for short runs and production.

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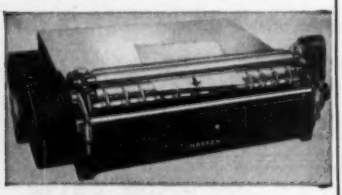

SCHAEFER GLUER-CEMENTER. Heavy-duty construction. Sizes 16" to 52" wide, for coating cardboard, leather, cork, masonite, foam rubber, fibre, leatherette, canvas & paper.

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Plenty of cellophane

Members of the Cellophane Manufacturers Industry Advisory Committee, meeting recently with officials of the National Production Authority, emphasized that cellophane production is now more than adequate to meet present demands and that no immediate cellophane shortage can be foreseen.

Committee members criticized NPA's listing of cellophane as a scarce material in its Revision of Designation 1, issued June 5, 1952, and contended that it has discouraged the use of cellophane and created the impression of a shortage. Although cellophane was inadvertently included on the list of scarce materials, NPA officials assured the committee that steps are now being taken to have it removed.

There is no backlog of orders, the industry is operating below capacity and new production facilities are being added, the cellophane manufacturers said. Volume of business is generally below that of 1951 and the seasonal peak demand which usually develops in October is not expected to tax present production facilities, committee members reported.

NPA officials asked the cellophane manufacturers to provide information regarding the anticipated demands through 1956, particularly for military requirements under partial and total mobilization.

Supplies of the necessary raw materials used by the cellophane industry were reported by NPA as being in adequate supply.

New concepts—

(This article continued from page 132)

as otherwise it is highly likely that protective coverings, including identification, will be removed prior to placing the item in the storage bin or parts box.

One last point: if an item is contained in a non-water-resistant carton or wrap, it should be tagged or labeled with at least minimum identification. Then if the container is destroyed it will still be possible to know what the item is.

7. *Is the completed package of such a size and shape that is convenient to store?*

In determining storage convenience, consideration must be given to the method of storing. For military use, supplies may be binned, stacked

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Chicago

NEW
"SNAP IT SHUT"
BAG AND LINER
CLOSURES

FOR SMALL BAGS
SMALL No.100-1
Small Bag Closure

FOR LARGE
CARTON AND DRUM
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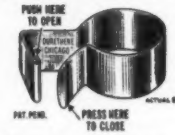
LARGE No.100-2
Large Bag and Liner Closure



- MADE OF STAINLESS STEEL
- INEXPENSIVE
- EASY TO USE
- UNAFFECTED BY TEMPERATURES
- CAN BE USED OVER AND OVER AGAIN
- NO TOOLS REQUIRED TO PUT ON OR TAKE OFF
- WILL NOT RUST
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PRODUCERS OF FLAT AND TUBULAR POLYETHYLENE FILM FOR THE BAG CONVERTER

DURETHENE Corporation
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or placed on shelves in adequate warehouses; may be kept in boxes attached to the equipment or in a separate location; may be kept in special vehicles; may be retained in the shipping containers and removed as needed, or may be located in the crudest of supply points in the field—to mention just a few of the conditions encountered.

It is usual to think of a rectangular package as being the easiest to handle and this is true for items to be placed on a shelf or packed in a shipping container. In binning or placing in spare-parts boxes, however, space is a controlling factor and a greater number of items can be stored if the packages are of minimum size, regardless of shape.

The answer to all these conditions undoubtedly lies in packaging the items initially in containers or wraps which meet all the protection requirements as well as being of minimum cubage and then providing rectangular intermediate containers for one or a multiple of the packages. The rectangular containers are not only easy to stack or place on warehouse shelves, but pack compactly in shipping containers, thus eliminating the necessity for the excessive dunnage which so often is the cause of container failure.

Many very specialized packaging requirements developed by procurement agencies arise from their knowledge of how the packages will be stored. This difference in storage conditions is one of the basic reasons why the Army, Navy and Air Force can't always agree on packaging.

The goal: good packaging

Whether it be called "military" or "commercial," in the last analysis we are striving primarily for protection and ease of handling. Military specifications are necessarily broad in their concept and are not intended to teach packaging or develop package design. Each agency and contractor must make a proper interpretation to meet his particular requirements. In this connection, contractors should feel free to advise procuring agencies of unrealistic packaging requirements—but only when they can offer what can be proved to be better, more economical packages.

Military supplies are the lifeblood of our entire defense effort—the best packaging know-how should enter into their protection.

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MODEL D-1
THERMOSTATIC CONTROL

★ DOUBLE POLE
★ SINGLE THROW
★ DIRECT ACTING
(breaks circuit on rising temperature)

WHEREVER the packaging industry uses heat controls, there you will find durable, dependable Robertshaw Controls, famous for their flexibility, simplicity and day-in, day-out performance.

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VisQueen*

stops breakage [redacted]
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without increasing packaging costs!

Fact is, VISQUEEN actually costs you a lot less in the long run. There's more yield per pound. It has highest tensile strength and tear resistance of any polyethylene film on the market. No other film comes close to duplicating the consistent uniformity of VISQUEEN. The gauge you buy is the gauge you get. VISQUEEN has no "weak spots," no high-and-low areas; therefore eliminates wasteful, sale-damaging and expensive breakage.

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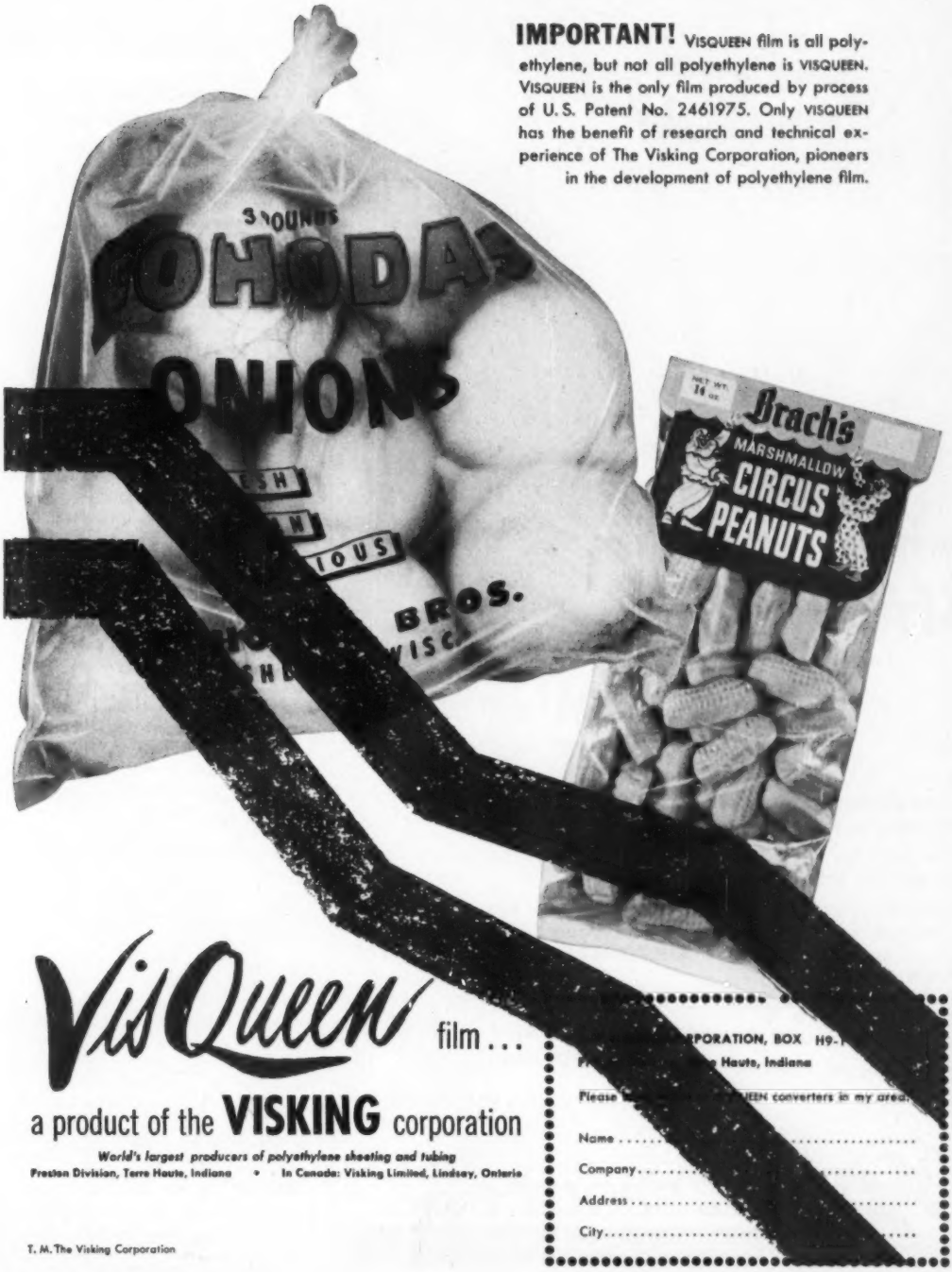
VISQUEEN and VISQUEEN converters (the nation's leading flexible packaging producers) work as a team. Only VISQUEEN converters are able to offer you the benefits of polyethylene leadership. Leadership through research of VISQUEEN's vast technical resources. *Only* VISQUEEN converters are able to place factory technicians in your plant to solve your packaging problems.

Use coupon for names of converters in your area . . . and latest on packaging with VISQUEEN. *Do it better—do it with VISQUEEN.*

IMPORTANT! VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. VISQUEEN is the only film produced by process of U. S. Patent No. 2461975. Only VISQUEEN has the benefit of research and technical experience of The Visking Corporation, pioneers in the development of polyethylene film.



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World's largest producers of polyethylene sheeting and tubing

Preston Division, Terre Haute, Indiana • In Canada: Visking Limited, Lindsay, Ontario

T. M. The Visking Corporation

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...e Haute, Indiana
Please ... VISQUEEN converters in my area.
Name .....
Company .....
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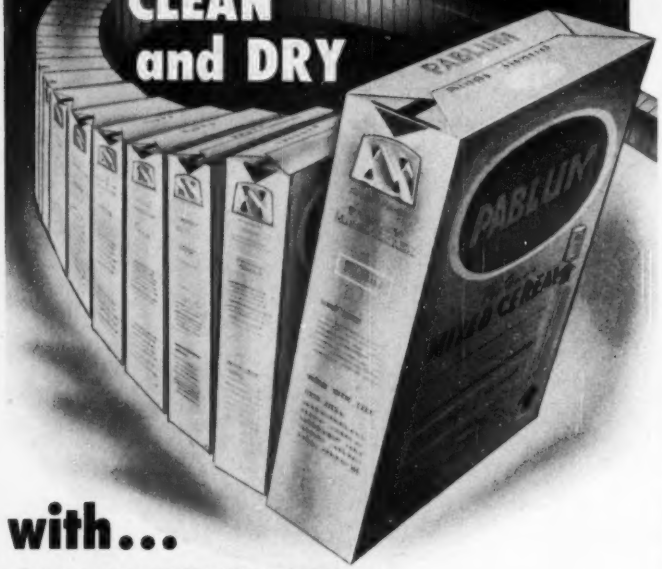
Keep Food Products CLEAN and DRY



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—the aluminum pouring spouts for better packaging of free-flowing products.

Your package is designed to do a great job of protection up to the point of opening for use. What then?

Dampness, dust, infestation can enter through torn tops. For full protection until the package is empty add SEAL-SPOUTS. They also guard against spillage. **CUSTOMERS PREFER PACKAGES WITH SPOUTS.**

SEAL-SPOUT Packages are—

EASY TO OPEN AND POUR
EASY TO CLOSE AND STORE

—and SEAL-SPOUTS can be applied right in your production line.

T. M. Reg. U. S. Pat. Off.

SEAL SPOUT Corp. 1934

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PI Forum

Great care has been taken with the scheduling of events for the 1952 Annual Forum of the Packaging Institute, Oct. 20-21-22, to assure an absolute minimum of program conflicts. Unless you are an unusual person, you will be able to take in every session that interests you, according to Program Committee Chairman R. Chester Reed.

In brief outline, the program is as follows: Mon., Oct 20—Opening session at 10 a.m., followed by luncheon. The afternoon will be taken up by three concurrent seminars on packaging of petroleum, food and drug and pharmaceutical products.

Tues., Oct. 21—Morning seminars will deal with printing and with adhesives. The afternoon will see the continuation of the all-day printing seminar and the first part of the production seminar. A cocktail party and buffet supper follow, starting at 5:30 p.m. or earlier.

Wed., Oct. 22—Production seminar continues concurrently with a discussion of packaging of equipment such as office machines. Luncheon will be followed by the shipping-container and packaging research and development seminars, concurrently.

At the opening session on Monday and at Tuesday's luncheon, the Forum theme of "Packaging in the Advancing Atomic Age," will be discussed. This theme has more than curiosity value, as will be attested by some persons from industry who will describe experiences with contamination by airborne radioactive particles which have traveled 2,000 miles. The food seminar promises some interesting action, particularly in a period to be devoted to outlining, for the benefit of package suppliers, just what a food package should accomplish. Problems of package-induced rancidity odors is another topic on the food schedule. Other items of interest, selected at random, are: Printing—handling and storage of printed packaging materials; Adhesives—users will set forth their expectations (and gripes) to be answered by machine and glue makers; Production—a session on ingenious gadgets not available on the open market and a session on successful methods of training line mechanics, operators and supervisors.

Advance registration forms, hotel reservation forms, etc., are available from the Packaging Institute, 342 Madison Ave., New York 17, N. Y.

Better Package... Lower Cost with a **BARTELT** Packager

MAKES POUCH BAG AUTOMATICALLY FROM ROLL OF HEAT SEALING PAPER—FILM—OR FOIL

Here is fast, automatic packaging at low cost . . . resulting in a sturdy, attractive, convenient package that will boost sales, and cut waste. The base machine makes a pouch-style bag, opens it for filling, seals it, and discharges a complete package. Design allows for selection of the filling equipment best adapted to your product. Whether you are packaging liquid, powder, solids, or multiple items, the Bartelt Machine will handle your needs. Below are shown the packages of a few of the many nationally known manufacturers who use Bartelt.

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1904 Harrison Avenue, Rockford, Illinois

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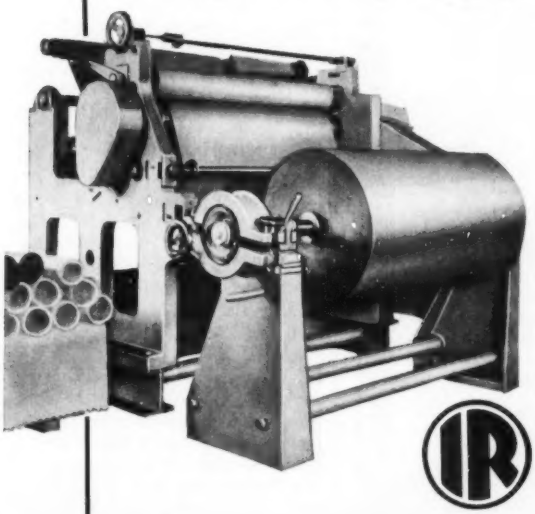
New INTA-ROTO Automatic Rewinder Changes Rolls Without Stopping



The new INTA-ROTO Automatic Rewinder, Model RS-1, permits rewinding short-length coreless rolls of locker foil, wrapping paper, insulating materials, etc., in continuous operation.

It cuts web at desired length and starts new roll automatically without stopping or slowing down. Operator only has to remove finished roll.

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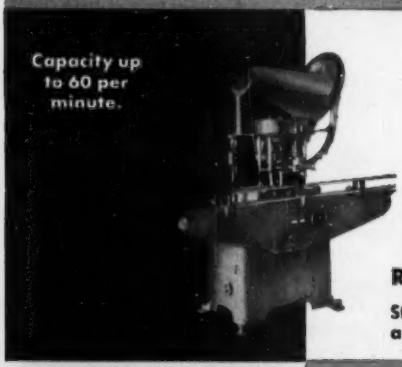
For more information write to:

INTA-ROTO
Machine Company, Inc.
BYRD AIRPORT, RICHMOND, VIRGINIA

RESINA CAPPERS

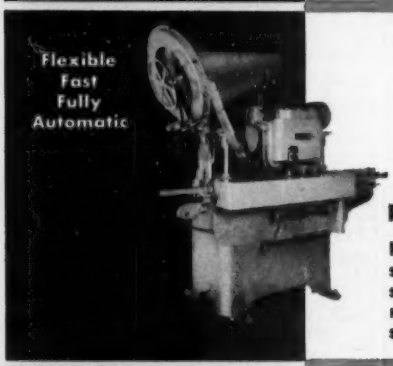
A MODEL FOR EVERY PURPOSE . . .
A SPEED FOR EVERY NEED!



Tops them all

RESINA

Standard, single head, automatic screw capper.



Tops them all

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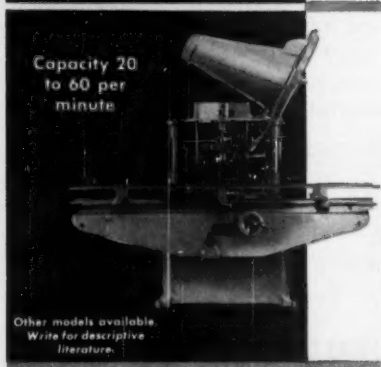

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Automatic innerseal machine for selecting and applying standard innerseals to various types and sizes of tin cans as commonly used in the oil industry.

Other models available. Write for descriptive literature.

Agents in principal cities throughout the United States and Canada

RESINA AUTOMATIC MACHINERY CO., INC.
BROOKLYN 31, N. Y.

Progress in resin—

(*This article continued from page 155*)

surfaces. There are a variety of food and tobacco packaging end uses for polyethylene-coated paper also.

Saran-coated paper is finding important use where its outstanding water-vapor and chemical resistance are needed, such as in packaging photographic film and as a cap liner. It is also being used as a greaseproof and water-vaporproof packaging material for precision metal parts. Several food packaging end uses are also expected to be prominent in the future use of this product.

It is expected that S-polymer coatings may find use in heat-sealed packages for food products where water and water-vapor resistance are required. Cellulose acetate, vinyl copolymers and nylon are all excellent grease barriers and should find uses as paper coatings in fields where special greaseproofness problems are encountered.

References

1. Burgess, L. M., and Swec, L. F., MODERN PACKAGING 23, No. 8, pp. 187-191, 258, 260. (April, 1950).

2. Hatfield, A. L., MODERN PACKAGING 23, No. 8, pp. 192-194. (April, 1950).

3. Burgess, L. M., MODERN PACKAGING 25, No. 1, pp. 119-121. (September, 1951).

Domino Sugar

(*This article continued from page 121*)

with possibilities for 40 turnovers a year. On a volume basis it is one of the best dollar producers per square foot and American Sugar Refining has always worked hard to give its dealers the best line of quality packages to help achieve maximum volume.

Another factor, certainly, in American Sugar's success is its research activity. In 1949 the company completed a pilot plant in Philadelphia, complementing the company's Research and Development Laboratories there which are continually engaged in basic and applied research as related to sugar refining and manufacturing.

The company's principal Domino products include all types of pure cane sugars produced from raw sugars obtained mainly from Cuba, Puerto Rico, the Philippines and Hawaii: granulated, tablet, superfine, confectioners, old-fashioned brown, light brown as well as Domino sugar-

and-cinnamon. The various sizes of packages to cover all the grades and units of these products necessitate more than a hundred different packs, involving deliveries ranging all the way from the tiny one-tablet wraps to bulk granulated sugar in trucks, "tote" bins and railroad hopper cars—as well as liquid sugar in tank trucks and tank cars.

American Sugar Refining's extensive raw-sugar operations in Cuba rival in size such industrial settlements as Port Sunlight and Essen. The Cunagua and Jaronu mills in Cuba serve a cane-producing area of about 700 square miles, with a working population of 20,000 persons. During the grinding season these two mills crush more than 40,000,000 lbs. of sugar cane every 24 hrs. around the clock seven days a week.

The soundness of Domino packaging has been so well demonstrated over a great span of years that the small, branded, consumer package has long since been adopted by all competitors. Virtually every manufacturer of refined sugar now puts out his own special package, brand named and designed in the most attractive form that can be devised to build good will and sales for that brand. But Domino had that all-important head start!

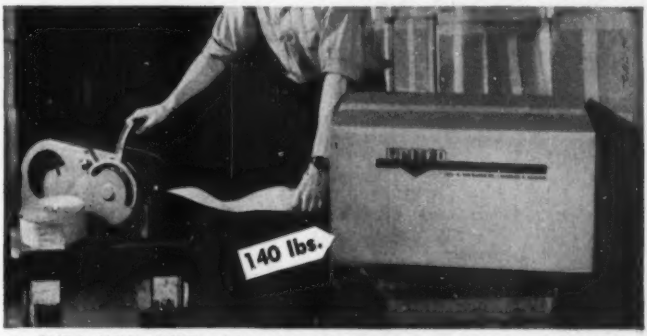
Today American Sugar Refining Co., in its five refineries, has capacity to produce more than 17,000,000 lbs. of sugar in a single day—more than was produced in a year in the whole United States a hundred years ago—and most of this production is sold in branded consumer packages.

CREDITS: *(principal current suppliers): Filling and sealing equipment, Pneumatic Scale Corp., Quincy 71, Mass., and Package Machinery Co., East Longmeadow P.O., Springfield, Mass. Case-loading and sealing equipment and bundle filling and sealing, Standard Knapp, Div. of Emhart Mfg. Co., Portland, Conn. Glass containers, Owens-Illinois Glass Co., Toledo 1, Ohio. Printed cellulose acetate for window cartons, Printon Corp., 304 E. 23rd St., New York 10. Heat-seal paper for individual packets, Nashua Corp., Nashua, N. H. Individual tablet-wrapping equipment, Package Machinery Co. Individual packet-filling and sealing equipment, Pneumatic Scale Corp. Waxed sulphite liners, Specialty Papers Co., Dayton, Ohio, and Nashua Corp. Paper bag filling and closing equipment, (for 5-lb.) Bemis Bro. Bag Co., 111-H N. Fourth St., St. Louis, Mo., and (for 10-lb.) St. Regis Paper Co., 230 Park Ave., New York 17.*

Angier

No matter what your cartons weigh . . . . . .

SAVE *when you seal 'em the* SNAKE TAPE - *way*



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Because Snake Tape is so strong, only TWO strips are used. Cuts sealing time two-thirds over previous method. (Atlas Collapsible Tube Co.)

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Center seamed sealed for *sure* protection at lowest cost.
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Snake Tape is gummed, waterproof and reinforced! Easily dispensed by "cut off" type machines. Send now for sample and facts.

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Heinz steps out

(This article continued from page 108)

up on the junior foods labels—will help to tie the two groups together and, more than casually, indicate, Heinz people say, that healthy youngsters are the result of the varied diet provided by the Heinz baby-food line.

The volume of the creative label design was under the direction of Heinz' own design studio in Pittsburgh. And while the company takes considerable pride in the work of its own departmental personnel in label development, it found that "outside" professional design assistance on a retainer-consulting basis is highly desirable and necessary.

Officials say they are not rushing the problem at Pittsburgh, headquarters of the company. Baby food in its new label series will not make its appearance nationally until January of next year. The following months will probably see the new baked-beans label ready for grocery shelves across the country. Labels for Heinz cooked spaghetti and cooked macaroni are still under study. But soups, pickles and jellies have gotten off to a good start in their new dress.

"We have too much at stake to jump to quick conclusions," says Mr. Majorack. "The Heinz product range is simply too great for hasty decisions to be made. Nor does the company claim infallibility on every label change that has been made. So far, however, the patience and adequate research have paid off in making the Heinz label program a success to date."

CREDIT: *Design consultation, Jim Nash, 405 E. 54th St., New York.*

Orange juice—

(This article continued from page 113)

to the individual stores, where they are currently kept in ice-cream storage compartments until taken out individually as customers order juice. A possible change in the packing is a move to a case of a different shape holding more individual-service packages.

To reconstitute the juice, Walgreen has developed a special device which a supplier of fountain equipment is now building. The device has a metal cup into which a slit-open package of juice is placed. A plunger

squeezes all of the frozen juice out of the bag under pressure. After the plunger is retracted, the bag is removed and the operator presses a button. The unit then automatically meters in the proper amount of water, washing all the juice down into a container resembling a malted-milk mixer can. After mixing and controlled aeration for about six seconds the machine automatically shuts off and the 10-oz. drink of reconstituted juice is ready for service. Walgreen's will have these units in all of its stores by mid-September.

Walgreen is already enthusiastically promoting the orange juice at its fountains as a ". . . big 10-oz. glass . . . a giant as compared to the customary 6-oz. serving . . . freshly mixed to your order, for 15 cents." The entire operation from order to service takes only a few seconds. Walgreen expects to sell 50 million glasses in 1953 and plans are under way to add California-packed lemonade in the same type of unit package to the Walgreen menu.

CREDITS: *Printed film for bags, Flex-Vac Div., Standard Packaging Corp., 629 Grove St., Jersey City, N. J. Automatic filling machinery, Bartelt Engineering Co., 1900 Harrison Ave., Rockford, Ill., and Stokes & Smith Co., subsidiary of Food Machinery & Chemical Corp., Frankford, Philadelphia 24, Pa. Cellophane, E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del., and Sylvania Div., American Viscose Corp., 1617 Pennsylvania Ave., Philadelphia 3, Pa.*

Insulated orchids

Re-usable inch-thick insulating panels of glass-fibre material used to line shipping cartons now help West Coast cut-flower suppliers to reach distant market areas. Formerly, losses during cold or very hot weather were heavy, largely because of flowers' exposure during "set-off time" at air-freight transfer points. With the new insulated packing, orchids reaching the East remain salable in florists' shops for as long as four days after arrival. The containers are being used by the Orchid Exchange & United Wholesale Florists, Los Angeles, and Orchid Research Co., Altadena, Calif.

CREDITS: *Insulated cartons, Safepac Corp., San Gabriel, Calif. Insulation, Owens-Corning Fiberglas Corp., New York.*

NIEMAND BROS.
ROUND and OVAL
CONTAINERS

low cost metal or all-paper closures

Niemand Bros. containers can really help promote the sale of all sorts of merchandise. They adequately protect your products at all times. And efficient, low cost dispenser closures may be made entirely of paper when required.

Your needs—from designs through production to delivery—can be handled promptly. Immediate attention will be given your inquiry.

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FOR SALE: Ten Model 248-2 Singer Electronic Seamers complete with Oscillators and Transmitters for bonding Thermo-Plastic materials. Less than 600 hours' use; excellent condition; available immediately.
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MODERN REBUILT EQUIPMENT AT TREMENDOUS SAVINGS: International S. S. Straightline 160/min. Vacuum Filler. Resina Models S and LC Automatic Cappers. CRCO New Way MH Wraparound Labeler. Stokes and Smith A Transwrap Filler. Capem E4F 4 head Rotary Capper. Island Equipment Styline Bottle Unscrambler. Stokes & Smith G1, G2, G6 and HG8S Auger Powder Fillers. Triangle Elec-Tri-Pak G2C, A6CA Fillers. Filler 4-Head S. S. Filler. Knapp 429 and Ceco Carton Closers. Pony ML and M. Labellrites. Pneumatic Scale Auto. Cartoning Lines. 60 and 30 per min. Ceco, Redington and R. A. Jones Automatic Cartoning Units. Package Machinery Co. CA2, DF1, FA and FA4Q Wrappers. Hayssen 3-7, Miller, Scandia Model SSU1 Wrappers. Campbell Auto. Cellophane Wrapper. This Is Only a Partial List. Tell Us Your Requirements.
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HELP WANTED

SALES REPRESENTATIVE: Flexible package converter desires representative handling other packaging line to carry line of wraps, pouches, and bags, printed and plain, of polyethylene, foil, coated papers, and military specification materials. Territories open Texas, Oklahoma, Louisiana, Nebraska, Iowa. Please reply giving lines and manufacturers represented and exact geographical territories covered. All territories are exclusive. Dura-Lee Corporation, 908 Broadway, Kansas City, Missouri.

DESIGN ENGINEER: Experienced in design and development of automatic machines. Vacation plan. Health and welfare program. Salary open. This is a permanent position with a rapidly expanding specialized packaging field. Barteit Engineering Co., 1900 Harrison Ave., Rockford, Illinois.

SALES REPRESENTATIVES: One of America's leading manufacturers of foil labels, foil pressure sensitive displays, foil diecut and embossed specialties and novelties. We are seeking top men on commission basis, now carrying one or two allied lines. Unusually fine opportunity with profitable future. Furnish full particulars of experience and territories now covering. All replies held in strictest confidence. Box 395, Modern Packaging.

ADHESIVES SALESMEN: For full line of flexible glues, resin adhesives, liquid glues and pastes. Metropolitan area & other territories available. High Commission. Box 400, Modern Packaging.

REPRESENTATIVES WANTED: Converter of cellophane, polyethylene, and other transparent materials, established twenty years, will place representatives in the following areas: Ohio, Michigan, Eastern Pennsylvania, Nebraska and Kansas City. Prefer men experienced in same or related line. Salary or commission. Give age, experience, present activities, ability to travel, in reply. Box 396, Modern Packaging.

ADHESIVES SALESMAN: Wanted as partner for industrial glue manufacturer. Very little money required. Man must be well acquainted and able to sell to industries such as paper box, book binders, packaging, etc. Replies strictly confidential. Box 401, Modern Packaging.

MANUFACTURER'S REPRESENTATIVE: Wanted by plastic bag closure manufacturer. Ideal extra item for man already covering packaging field. Box 397, Modern Packaging.

PAPER SALESMAN: Large established paper converter in New York City area is seeking a representative with following in packaging field such as candy wraps, food wraps, gift wraps, soap wraps, who is conversant with aniline type printing. Good opportunity; salary up to $15,000. Box 405, Modern Packaging.

SALESMEN: We have openings for several men interested in selling self-opening bag specialties, including coffee bags. No objections to side-line men. In reply give age, experience, present lines carried, territory covered, etc. Box 398, Modern Packaging.

REPRESENTATIVES: Men with established following in industrial trade selling paper box, carton, bags, or general stationery line—We offer a protected, profitable repeat line of heat sealed cellophane bags. Advise lines carried. Replies confidential. Box 393, Modern Packaging.

MISCELLANEOUS

WANTED: Plastic scrap and rejects in any form. Cellulose Acetate, Butyrate, Polystyrene, Vinyl Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Box 390, Modern Packaging.

WANTED: Cameron Slitter, Packaging Line, Labeler, Capper, and Mixer. Box 391, Modern Packaging.

CUSTOM PACKAGING SERVICE: Time available now on Barteit automatic machine. Pouch style bag automatically made, filled, sealed! Liquids, powders, solids, multiple items. Complete, accurate, ultra-clean service guaranteed. Box 394, Modern Packaging.

WANTED: Analin Press for cellophane 2 to 4 color 18" to 32" web; Slitter and rewinder 32" and up; Potdevin cellophane bag machine for flat and gusset bags; Combination Analin tail bag printer, and roll to roll printer 2 to 4 color 18" web or more. Box 399, Modern Packaging.

WANTED: Interested in purchasing specialty bag plant; one that can manufacture and print Cellophane, Pliofilm and Polyethylene bags and wraps. Box 404, Modern Packaging.

WANTED: Plastic Scrap—Cellulose Acetate and rigid vinyl sheet scrap in any quantity. Also Polystyrene, Acetate, Butyrate molded rejects, scrap and excess molding powder inventories. Box 392, Modern Packaging.

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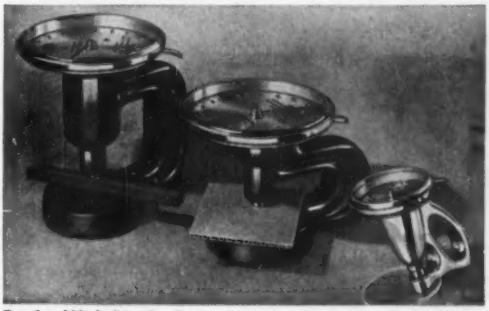
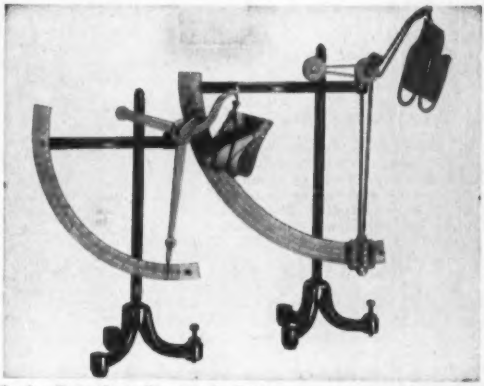


Basis Weight Scales, accurate, direct reading—no computation necessary. Tissue Scale on left; Paper Scale on right; weigh sheet of known size to determine 480 or 500 sheet weight. Boxboard Scale also available. Write Cady for complete data.



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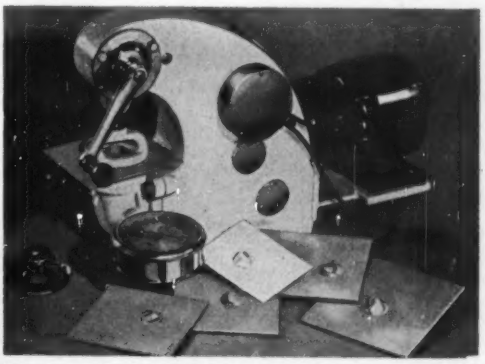


Write for complete information and prices of Cady Testing Instruments for packaging materials: Basis Weight Scales for papers, tissues, boards; Micrometers, Burst Testers.

E. J. CADY & COMPANY 134 N. LA SALLE ST. CHICAGO 2, ILL.

INDEX OF ADVERTISERS

SEPTEMBER 1952

Acme Backing Corp. 15
Aluminum Company of America 27, 163
Aluminum Foils, Inc. 79
American Can Co. 77
American Coating Mills Corporation 97
American Cyanamid Company, Plastics Department 60
American Viscose Corporation, Sylvania Division 49
Anderson Bros. Mfg. Co. 172
Angier Corporation 213
Arkell and Smiths 75
Armstrong Cork Co., Glass and Closure Division 165

Bakelite Company, A Division of Union Carbide and Carbon Corporation 31, 191
Bartelt Engineering Company .. 211
Beck, Charles, Machine Corporation 87
Bemis Bro. Bag Company 42
Bensing Bros. and Deeney Sales Company 57
Bernardin Bottle Cap Company, Inc. 25
Betner, Benj. C., Co. 188
Black-Clawson Co., The, Dilts Machine Works 20
British Cellophane Limited 172
Brown Company 86
Burt, F. N., Company Inc. 149

Cady, E. J., & Company 217
Cameo Die & Label Company .. 183
Celanese Corporation of America 92
Celluplastic Corporation 47
Central States Paper & Bag Co. . 91
Champion Paper and Fibre Company, The 37-40
Champlain Company, Inc. 180
Chaspee Manufacturing Company, The 205
Chester Packaging Products Corp. 83
Chisholm-Ryder Company of Pa. 176
Claremont Waste Mfg. Company . 181
Clark-Aiken Company, The 9
Classified 216
Cleveland Container Co., The ... 73
Consolidated Packaging Machinery Corp. 193
Container Equipment Corporation 54
Creators Art Service 200
Cromwell Paper Company 6
Crown Can Company 22
Crown Cork & Seal Company ... 82
Crown Cork Specialty Corp. 18
Crystal Tube Corporation 217
Culligan Zeolite Company 52

Dexter Folder Company 182
Dilts Machine Works, Division of The Black-Clawson Co. 20
Dobeckmun Company, The 5
Doughboy Industries, Inc. 178
Dow Chemical Company, The, Plastics Dept. 195
du Pont de Nemours, E. I., & Co. (Inc.), Cellophane 161
du Pont de Nemours, E. I., & Co. (Inc.), Polychemicals 19
Durethene Corporation 206
Dusenbery, John, Company, Inc. 176

Eastman Kodak Company 167
Economic Machinery Company, Division of Geo. J. Meyer Manufacturing Co. 30
Empire Box Corporation 63
Ever Ready Label Corp. 199

Fairest, Morgan, Ltd. 62
Federal Tool Corporation 32
Fibleco-Illinois Corporation 56
Fisher's Foils Ltd. 69, 70
Frazier & Son 198

Gair, Robert, Company, Inc. ... 1
Gardner Board and Carton Co., The 28, 29
Gaylord Container Corporation .. 53
Globe Heat-Seal Inc. 166
Goodrich, B. F., Chemical Company, The Geon Division 7
Goodyear Tire & Rubber Company, Pliofilm Dept. 138, 139
Gottscho, Adolph, Inc. 174

Hagerty Bros. & Co. 166
Harmon, Ira Co. 193
Hayssen Mfg. Company 76
Hazel-Atlas Glass Company 14
Heekin Can Co. 8
Heinrich, H. H., Company 35
Hinde & Dauch 171
Holes, Floyd A., Co., The 64
Howard Plastics 180
Howell, F. M. & Co. 172
Hudson Sharp Machine Co. 202

Industrial Marking Equipment Co. 182
Inta-Roto Machine Company, Inc. 211
Interchemical Corp., Printing Ink Division 94, 95
International Staple & Machine Company 24

Kimble Glass Division, Owens-Illinois Glass Company 168
King, Charles E., & Co. 178
Koppers Company, Inc. 81

Lembo Machine Works, Inc. ... 193
Lermer Plastics, Inc. 204
Lowe Paper Company 34
Lusteroid Container Company, Inc. 189

Mack Molding Company, Inc. ... 197
Manhasset Machine Company, Inc. 219
Manufacturers' Literature . 185, 186
Markem Machine Company 189
McLaurin-Jones Co. 203
Mead Board Sales, Inc. 65
Mercury Heat Sealing Equipment Company 201
Michigan Carton Co. Inside Back Cover
Middlesex Paper Tube Co., Inc. . 199
Miller, Walter P., Co., Inc. 21
Mills, Elmer E., Corporation 17
Milprint Inc. 59
Minnesota Mining & Mfg. Co. .. 16
Monsanto Chemical Company, Plastics Division 220
Mosstype Corporation 184
MRM Company, Inc. 181

Nashua Corporation 98
National Adhesives Inside Front Cover
Newark Paraffine & Parchment Paper Co. 55
Nichols Paper Company 183
Niemand Bros. Inc. 215

Old Dominion Box Company, Inc. 33
Olive Can Company 66
Owens-Illinois Glass Company .. 175
Owens-Illinois Glass Co., Kimble Glass Division 168
Oxford Paper Company 10

Package Machinery Company ... 150
Paisley Products Incorporated .. 48
Pak-Rapid Inc. 182
Paper Machinery & Research, Inc. 196
Paterson Parchment Paper Company 46
Perl Machine Mfg. Co. 200
Peter Partition Corp. 205
Peters Machinery Company 164
Pneumatic Scale Corp., Ltd. 187
Popper & Sons, Inc. 219
Potdevin Machine Co. 68

R. C. Can Company 43
Rapid Cutting Co., Inc. 192
Rayon Processing Co. of R. I., Inc. 169
Redington, F. B., Co. 3
Reeves Brothers Inc., W. Harris Thurston Division 173
Resina Automatic Machinery Co., Inc. 212
Rexford Paper Company 184
Reynolds Metals Company ... 12, 13
Rhinelander Paper Company .. 179
Riegel Paper Corporation 58
Ritchie, W. C., and Company 84, 85
Robertshaw-Fulton Controls Company 207
Roto Bag Machine Corp. 177
Rowell, E. N., Co., Inc. 71
Rubber Latex Co. of America .. 181

Scandia Manufacturing Company 198
Schaefer Machine Co. 206
Seal Spout Corp. 210
Sefton Fibre Can Company 90
Shellmar Products Corporation Back Cover
Standard Printing Company 23
Steigerwald, A. M., Company ... 74
Stokes & Smith Co. 62
Stuyvesant Engineering Company 174
Sun Tube Corporation 44
Sylvania Division, American Viscose Corporation 49

Taranger, E., Inc. 67
Technopol Laboratories Limited . 26
Triangle Package Machinery Co. 204
Tri-State Plastic Molding Co., Inc. 11
Tupper Corporation 36

Union Bag & Paper Corporation 61
Union Carbide and Carbon Corporation, Bakelite Division . 31, 191
U. S. Automatic Box Machinery Co., Inc. 78
U. S. Bottlers Machinery Company 93

Vanant Products 96
Venesta Ltd. 45
Visking Corporation ... 51, 208, 209
Vlchek Tool Company 72

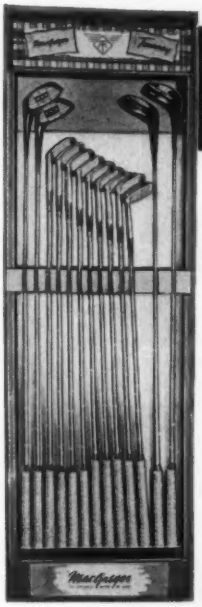
Warner Brothers Company, The 50
Waxed Paper Institute, Inc. .. 88, 89
Weinman Brothers, Inc. 178
Whiteford Paper Co., Inc. 176
Wolverine Paper Converting Machinery Corp. 200
Wright Machinery Company 41

Zumbiel, C. W., Company 219

Modern packaging

Published by Modern Packaging Corp.
575 Madison Avenue, New York 22, N.Y.

A BRESKIN Publication



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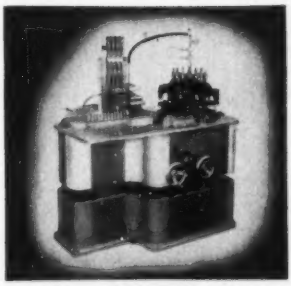

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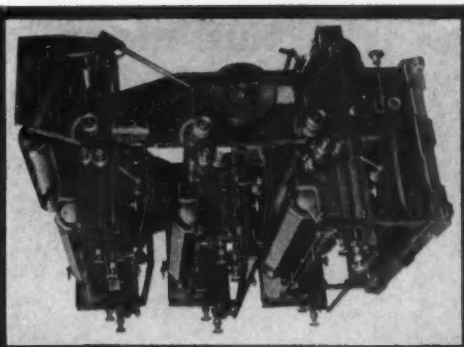

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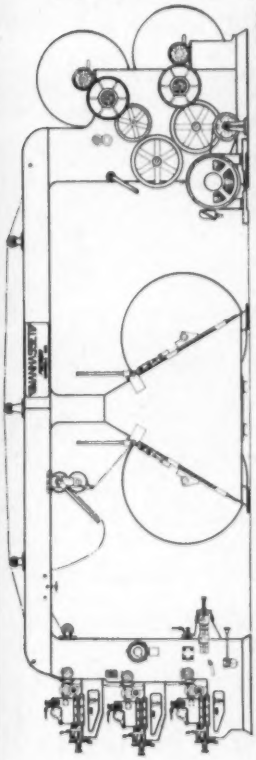

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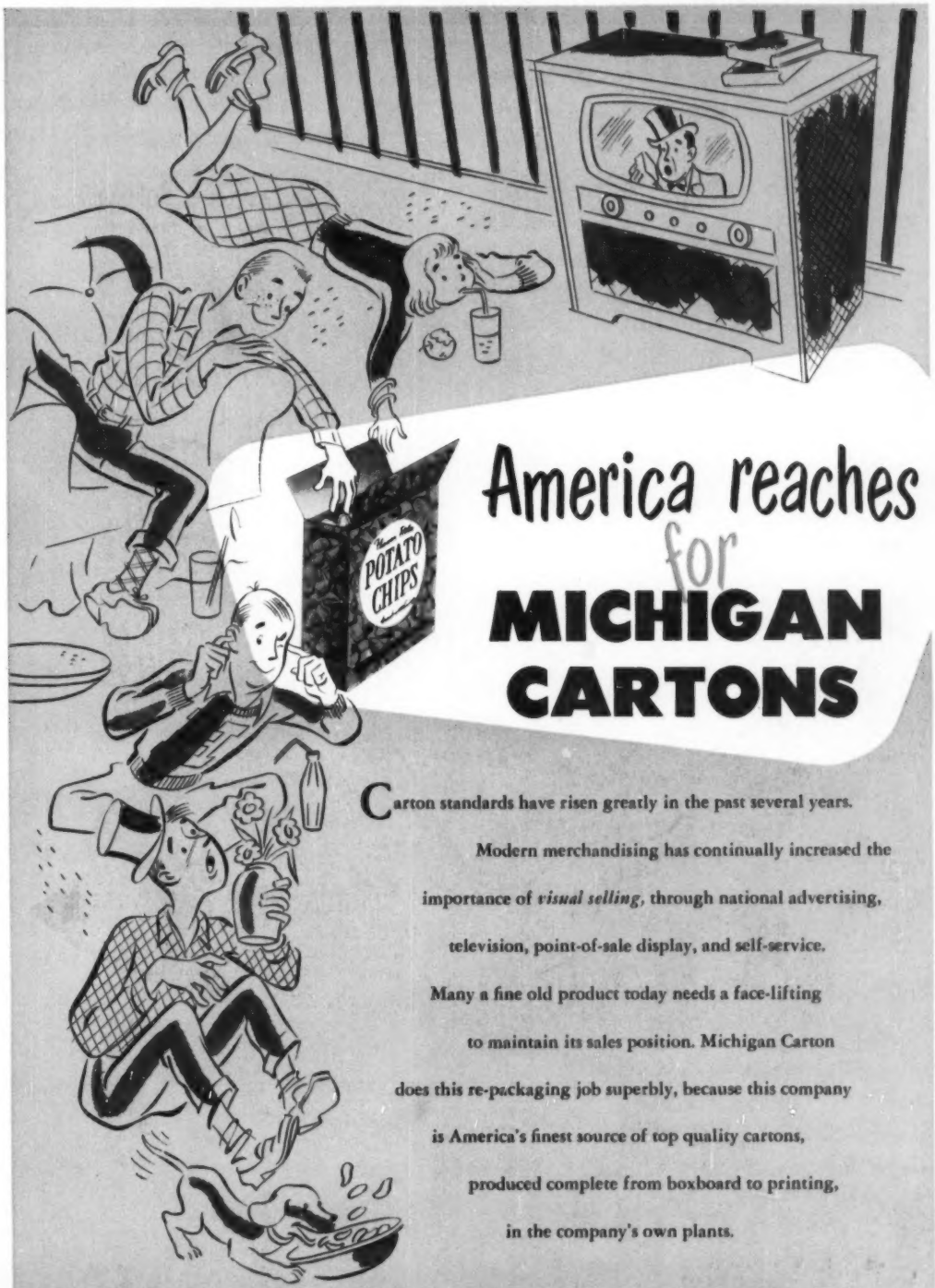

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